LDC #: 26078B|a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	•			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of > 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?		✓		
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 26078 13|e

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal Standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XI. Target Compound Identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound Quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively Identified Compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System Performance				
System performance was found to be acceptable.	✓			
XV. Overall Assessment of Data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field Duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field Blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 26078 B/a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
Y N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?
Y N N/A Were all %D and RRFs within the validation criteria of ≤25 %D and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %D (Limit: <25.0%)	Finding RRF (Limit: >0.05)	Associated Samples	Qualifications
	3/01/11	ICV	PP	36		All soils	J/UJ/A (C)
	2/10/11	ICV	JJ	30		All water	↓
			F	28		↓	↓
	4/21/11 11:50	CCV	M	26		All soils	J/UJ/A (C)
			Y	45		↓	↓
			Z	57			
			III	26		↓	↓
	4/22/11 9:47	CCV	JJ	37		All water	(C)
			KK	37		↓	↓
			O	36			
			L	34		↓	↓

LDC #: 26078B1a

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank associated with every sample in this SDG?
Y N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?
Y N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

Blank analysis date: 4/21/11
Conc. units: ug/Kg
Associated Samples: All Soils (B)

Compound	Blank ID	10X		2	3	4				
	YBLKB32									
E	0.46	4.6		0.65/4.2U	0.51/4.0U	0.47/3.7U				
CRQL										

Blank analysis date:
Conc. units:
Associated Samples:

Compound	Blank ID	Sample Identification								
CRQL										

All results were qualified using the criteria stated below except those circled.

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, Carbon disulfide and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 26078B/a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer: C

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

[✓ Y] N N/A Was a LCS required?
Y [✓ N] N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		LCS/D Y25	KK	130 (64-129)	( )	( )	YBLKY25, 5, 6	J/Pdet (L)
			θ	126 (75-123)	( )	( )	↓	↓ ↓
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC #: 26078B/a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: e

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (50 std)	Recalculated RRF (50 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL SOIL	3/01/11	C (1st internal standard)	0.4158	0.4158	0.4296	0.4296	9	9
			EE (2nd internal standard)	1.6663	1.6663	1.5916	1.5916	10	10
			JJJ (3rd internal standard)	1.4144	1.4144	1.3506	1.3506	9	9
			(4th internal standard)						
2	ICAL water	2/10/11	C (1st internal standard)	0.3993	0.3993	0.4001	0.4001	7	7
			EE (2nd internal standard)	1.9698	1.9698	1.9465	1.9465	3	3
			JJJ (3rd internal standard)	1.6823	1.6823	1.6848	1.6848	4	4
			(4th internal standard)						
3			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B/2

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	ccv	4/21/11	C (1st internal standard)	0.4296	0.4799	0.4799	12	12
	11:50		EE (2nd internal standard)	1.5916	1.7815	1.7815	12	12
			JJJ (3rd internal standard)	1.3506	1.4849	1.4849	10	10
			(4th internal standard)					
2	ccv	4/22/11	C (1st internal standard)	0.4001	0.3931	0.3931	2	2
	9:47		EE (2nd internal standard)	1.9465	2.1204	2.1204	9	9
			JJJ (3rd internal standard)	1.6848	1.8166	1.8166	8	8
			(4th internal standard)					
3			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
4			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B6

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane	50.0	49.392	99	99	0
1,2-Dichloroethane-d4	↓	48.918	98	98	↓
Toluene-d8		50.253	101	101	
Bromofluorobenzene		43.879	88	88	

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: 26018P19

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = | LCS - LCSD | * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: lcsP soil

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene	20	20	22.49	22.05	112	112	110	110	2	2
Trichloroethene			19.7	19.26	98	98	96	96	2	2
Benzene			20.99	20.82	105	105	104	104	1	1
Toluene			20.3	20.03	102	102	100	100	1	1
Chlorobenzene			19.72	19.53	99	99	98	98	1	1

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078 B/a

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
RRF	=	Relative response factor of the calibration standard.
V_o	=	Volume or weight of sample pruged in milliliters (ml) or grams (g).
Df	=	Dilution factor.
%S	=	Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. #1, E:

Conc. = (32897)(50)(5) / (948704)(0.3108)(5.59)(0.857)

=

5.82 ug/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	April 18, 2011
LDC Report Date:	August 31, 2011
Matrix:	Soil/Water
Parameters:	1,4-Dioxane
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE130

Sample Identification

SL-032-SA5A-SB-3.0-4.0
SL-172-SA5A-SB-4.0-5.0
SL-174-SA5A-SB-2.0-3.0
SL-254-SA5A-SB-2.5-3.5
TB-041811
EB13-SA5A-SB-041811

Introduction

This data review covers 4 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B using Selected Ion Monitoring (SIM) for 1,4-Dioxane.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for 1,4-Dioxane.

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 25.0% for 1,4-Dioxane.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for 1,4-Dioxane.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No 1,4-dioxane was found in the method blanks.

Sample TB-041811 was identified as a trip blank. No 1,4-dioxane was found.

Sample EB13-SA5A-SB-041811 was identified as an equipment blank. No 1,4-dioxane was found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE130	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
1,4-Dioxane - Data Qualification Summary - SDG DE130

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE130	SL-032-SA5A-SB-3.0-4.0 SL-172-SA5A-SB-4.0-5.0 SL-174-SA5A-SB-2.0-3.0 SL-254-SA5A-SB-2.5-3.5 TB-041811 EB13-SA5A-SB-041811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
1,4-Dioxane - Laboratory Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
1,4-Dioxane - Field Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

LDC #: 26078B1b **VALIDATION COMPLETENESS WORKSHEET** Date: 8/29/11
SDG #: DE130 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: KM
2nd Reviewer: AT

METHOD: GC/MS 1,4-Dioxane (EPA SW 846 Method 8260B-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/18/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	LCS ID
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	TB = 5 EB = 6

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Soil + water

1	SL-032-SA5A-SB-3.0-4.0 S	11	VBLKE98	21		31	
2	SL-172-SA5A-SB-4.0-5.0	12	VBLKE97	22		32	
3	SL-174-SA5A-SB-2.0-3.0	13		23		33	
4	SL-254-SA5A-SB-2.5-3.5	14		24		34	
5	TB-041811 W	15		25		35	
6	EB13-SA5A-SB-041811 W	16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 26078B1b

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: C

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of $\geq$ 0.990?			✓	
Were all percent relative standard deviations (%RSD) $\leq$ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) $\leq$ 25% and relative response factors (RRF) $\geq$ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?			✓	
Did compound spectra meet specified EPA "Functional Guidelines" criteria?			✓	
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?			✓	
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 26078B1b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (5 std)	Recalculated RRF (5 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	11/7/10	1,4-Dioxane (1st internal standard)	1.3539	1.3539	1.3396	1.3396	2	2
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
2	ICAL	11/01/10	↓ (1st internal standard)	1.3004	1.3004	1.3219	1.3219	1	1
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
3			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B1b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	ccv	4/20/11 14:35	1,4-Dioxane (1st internal standard)	1.3396	1.3873	1.3873	4	4
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
2	ccv	4/20/11 8:47	↓ (1st internal standard)	1.3219	1.4150	1.4150	7	7
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
3			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
4			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26678B10

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8	~~97~~ 10	9.680	97	97	0
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: 46078P1D

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = | LCS - LCSD | * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: LCS E98

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,4-Dioxane	125	125	121.77	136.46	97	97	109	109	11	11
~~1,1-Dichloroethene~~										
Trichloroethene										
Benzene										
Toluene										
~~Chlorobenzene~~										

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B1b

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Y N (N/A) Were all reported results recalculated and verified for all level IV samples?

Y N (N/A) Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
RRF	=	Relative response factor of the calibration standard.
V_o	=	Volume or weight of sample pruged in milliliters (ml) or grams (g).
Df	=	Dilution factor.
%S	=	Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. _____, _____:

Conc. = ( ) ( ) ( ) / ( ) ( ) ( ) ( )

= ND

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 18, 2011

LDC Report Date: August 31, 2011

Matrix: Soil/Water

Parameters: Semivolatiles

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE130

Sample Identification

SL-056-SA8N-SS-0.0-0.05
SL-057-SA8N-SS-0.0-0.05
SL-071-SA8N-SS-0.0-0.05
SL-080-SA8N-SS-0.0-0.05
SL-085-SA8N-SS-0.0-0.05
SL-086-SA8N-SS-0.0-0.05
SL-132-SA8N-SS-0.0-0.05
EB05-SA8N-SS-041811
SL-032-SA5A-SB-3.0-4.0
SL-172-SA5A-SB-4.0-5.0
SL-174-SA5A-SB-2.0-3.0
SL-254-SA5A-SB-2.5-3.5
EB13-SA5A-SB-041811

Introduction

This data review covers 11 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C for Semivolatiles.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
4/27/11	Benzidine	30	SL-086-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 SL-032-SA5A-SB-3.0-4.0 SL-172-SA5A-SB-4.0-5.0 SL-174-SA5A-SB-2.0-3.0 SL-254-SA5A-SB-2.5-3.5	J (all detects) UJ (all non-detects)	P

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatile contaminants were found in the method blanks.

Samples EB05-SA8N-SS-041811 and EB13-SA5A-SB-041811 were identified as equipment blanks. No semivolatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
112WJLCS/D (All water samples in SDG DE130)	Benzoic acid	-	-	31 (≤30)	J (all detects) UJ (all non-detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE130	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Semivolatiles - Data Qualification Summary - SDG DE130

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE130	SL-086-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 SL-032-SA5A-SB-3.0-4.0 SL-172-SA5A-SB-4.0-5.0 SL-174-SA5A-SB-2.0-3.0 SL-254-SA5A-SB-2.5-3.5	Benzidine	J (all detects) UJ (all non-detects)	P	Continuing calibration (%D) (C)
DE130	EB05-SA8N-SS-041811 EB13-SA5A-SB-041811	Benzoic acid	J (all detects) UJ (all non-detects)	P	Laboratory control samples (RPD) (E)
DE130	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-086-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 EB05-SA8N-SS-041811 SL-032-SA5A-SB-3.0-4.0 SL-172-SA5A-SB-4.0-5.0 SL-174-SA5A-SB-2.0-3.0 SL-254-SA5A-SB-2.5-3.5 EB13-SA5A-SB-041811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Semivolatiles - Field Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

LDC #: 26078B2a **VALIDATION COMPLETENESS WORKSHEET** Date: 8/30/11
SDG #: DE130 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer:
2nd Reviewer:

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/18/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30, r^2
IV.	Continuing calibration/ICV	SW	ICV/CCV ≤ 25
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	client specific
VIII.	Laboratory control samples	SW	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	EB-8, 13

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:
soil + water

1 1	SL-056-SA8N-SS-0.0-0.05 S	11 1	SL-174-SA5A-SB-2.0-3.0 S	21	SBLK.LA112	31	
2 1	SL-057-SA8N-SS-0.0-0.05	12 1	SL-254-SA5A-SB-2.5-3.5 ↓	22 2	SBLKWJ112	32	
3 1	SL-071-SA8N-SS-0.0-0.05	13 2	EB13-SA5A-SB-041811 W	23		33	
4 1	SL-080-SA8N-SS-0.0-0.05	14		24		34	
5 1	SL-085-SA8N-SS-0.0-0.05	15		25		35	
6 1	SL-086-SA8N-SS-0.0-0.05	16		26		36	
7 1	SL-132-SA8N-SS-0.0-0.05 ↓	17		27		37	
8 2	EB05-SA8N-SS-041811 W	18		28		38	
9 1	SL-032-SA5A-SB-3.0-4.0 S	19		29		39	
10 1	SL-172-SA5A-SB-4.0-5.0 ↓	20		30		40	

LDC #: 26078132a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?		✓		
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogates				
Were all surrogate %R within QC limits?	✓			
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
X. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
XI. Internal Standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within + 30 seconds from the associated calibration standard?	✓			
XII. Target Compound Identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIII. Compound Quantitation				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIV. Tentatively Identified Compounds				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XV. System Performance				
System performance was found to be acceptable.	✓			
XVI. Overall Assessment				
Overall assessment of data was found to be acceptable.	✓			
XVII. Field Duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVIII. Field Blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA Method 8270)

A. Phenol	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol	III. Benzo(a)pyrene
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene	T. 4-Chloroaniline	II. 4-Nitrophenol	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene	JJ. Dibenzofuran	YY. Fluoranthene	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine	Y. 2,4,6-Trichlorophenol	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. 1-Methylnaphthalene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)	FFF. Di-n-octylphthalate	UUU.
N. 2-Nitrophenol	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 26078B2a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [signature]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours of sample analysis for each instrument?

Y N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?

Y N N/A Were all %D and RRFs within the validation criteria of ≤25 %D and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤25.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	4/27/11 7:44	ccv	SSS	30		blks 6, 7, 9 → 12	J/UJ/P (C)

CONCAL.2S

LDC #: 26078B2c

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?
Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		112WJLCS/D	PPP	( )	( )	31 (30)	All water	J/UJ/P (EL)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC #: 26078B2c

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (50 std)	Recalculated RRF (50 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	4/13/11	Phenol (1st internal standard)	2.681	2.681	2.531	2.531	7	7
			~~Naphthalene~~ Nitrobenzene (2nd internal standard)	0.733	0.733	0.672	0.672	6	6
			~~Fluorene~~ 2-Nitroaniline (3rd internal standard)	0.341	0.341	0.311	0.311	10	10
			~~Pentachlorophenol~~ Pentachlorophenol (4th internal standard)	0.174	0.174	0.157	0157	10	10
			Bis(2-ethylhexyl)phthalate (5th internal standard)	0.733	0.733	0.654	0.654	10	10
			Benzo(a)pyrene (6th internal standard)	1.194	1.194	1.176	1.176	12	12
2	ICAL	4/01/11	Phenol (1st internal standard)	3.124	3.124	3.056	3.056	6	6
			~~Naphthalene~~ Nitrobenzene (2nd internal standard)	0.556	0.556	0.545	0.545	2	2
			~~Fluorene~~ 2-Nitroaniline (3rd internal standard)	0.437	0.437	0.415	0.415	7	7
			Pentachlorophenol (4th internal standard)	0.158	0.158	0.156	0.156	6	6
			Bis(2-ethylhexyl)phthalate (5th internal standard)	0.747	0747	0.715	0715	7	7
			Benzo(a)pyrene (6th internal standard)	1.229	1.229	1.163	1.163	11	11
3			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B2c

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	ccv	4/27/11	Phenol (1st internal standard)	2.531	2.706	2.706	7	7
		7:44	~~Naphthalene~~ Nitrobenzene (2nd internal standard)	0.672	0.714	0.714	6	6
			~~Fluorene~~ 2-Nitroaniline (3rd internal standard)	0.311	0.356	0.356	14	14
			Pentachlorophenol (4th internal standard)	0.157	0.172	0.172	9	9
			Bis(2-ethylhexyl)phthalate (5th internal standard)	0.654	0.715	0.715	9	9
			Benzo(a)pyrene (6th internal standard)	1.176	1.286	1.286	9	9
2	ccv	4/24/11	Phenol (1st internal standard)	3.056	2.819	2.819	8	8
		9:32	~~Naphthalene~~ Nitrobenzene (2nd internal standard)	0.545	0.565	0.565	4	4
			~~Fluorene~~ 2-Nitroaniline (3rd internal standard)	0.415	0.428	0.428	3	3
			Pentachlorophenol (4th internal standard)	0.156	0.139	0.139	11	11
			Bis(2-ethylhexyl)phthalate (5th internal standard)	0.715	0.809	0.809	13	13
			Benzo(a)pyrene (6th internal standard)	1.163	1.187	1.187	2	2
3			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B2c

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: A

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	100	80.657	81	81	0
2-Fluorobiphenyl	↓	84.250	84	84	
Terphenyl-d14	↓	90.541	91	91	
Phenol-d5	200	192.467	96	96	
2-Fluorophenol	↓	187.895	94	94	
2,4,6-Tribromophenol	↓	216.722	108	108	↓
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 26078S

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: LCS

Compound	Spike Added (ug/kg)		Spike Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol	1666.67	NA ~~1666.67~~	1659.67	NA	100	100				
N-Nitroso-di-n-propylamine			1491.21		89	89				
4-Chloro-3-methylphenol			1676.57		101	101				
Acenaphthene			1613.14		97	97				
Pentachlorophenol			1191.18		71	71				
Pyrene	↓	↓	1655.86	↓	99	99	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B2a

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_i)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. #1, EEE:

Conc. = $\frac{(5764)(40)(1000)(\quad)(\quad)}{(581182)(0.654)(30)(0.857)(\quad)}$

=

24 ug/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 18, 2011

LDC Report Date: August 31, 2011

Matrix: Soil/Water

Parameters: Semivolatiles

Validation Level: Level IV

Laboratory: Lancaster laboratories

Sample Delivery Group (SDG): DE130

Sample Identification

SL-056-SA8N-SS-0.0-0.05
SL-057-SA8N-SS-0.0-0.05
SL-071-SA8N-SS-0.0-0.05
SL-080-SA8N-SS-0.0-0.05
SL-085-SA8N-SS-0.0-0.05
SL-086-SA8N-SS-0.0-0.05
SL-132-SA8N-SS-0.0-0.05
EB05-SA8N-SS-041811
SL-032-SA5A-SB-3.0-4.0
SL-172-SA5A-SB-4.0-5.0
SL-174-SA5A-SB-2.0-3.0
SL-254-SA5A-SB-2.5-3.5
EB13-SA5A-SB-041811

Introduction

This data review covers 11 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C using Selected Ion Monitoring (SIM) for Semivolatiles.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
4/15/11	Di-n-octylphthalate	26	All samples in SDG DE130	J (all detects) UJ (all non-detects)	A
	Benzo(b)fluoranthene	30		J (all detects) UJ (all non-detects)	

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatile contaminants were found in the method blanks.

Samples EB05-SA8N-SS-041811 and EB13-SA5A-SB-041811 were identified as equipment blanks. No semivolatile contaminants were found with the following exceptions:

Equipment Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EB05-SA8N-SS-041811	4/18/11	Butylbenzylphthalate Di-n-butylphthalate Bis(2-ethylhexyl)phthalate Di-n-octylphthalate	0.33 ug/L 0.37 ug/L 0.72 ug/L 0.52 ug/L	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-086-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05
EB13-SA5A-SB-041811	4/18/11	Di-n-butylphthalate Bis(2-ethylhexyl)phthalate Naphthalene Di-n-octylphthalate	0.32 ug/L 0.30 ug/L 0.031 ug/L 0.27 ug/L	SL-032-SA5A-SB-3.0-4.0 SL-172-SA5A-SB-4.0-5.0 SL-174-SA5A-SB-2.0-3.0 SL-254-SA5A-SB-2.5-3.5

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated field blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE130	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Semivolatiles- Data Qualification Summary - SDG DE130

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE130	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-086-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 EB05-SA8N-SS-041811 SL-032-SA5A-SB-3.0-4.0 SL-172-SA5A-SB-4.0-5.0 SL-174-SA5A-SB-2.0-3.0 SL-254-SA5A-SB-2.5-3.5 EB13-SA5A-SB-041811	Di-n-octylphthalate Benzo(b)fluoranthene	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Continuing calibration (ICV %D) (C)
DE130	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-086-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 EB05-SA8N-SS-041811 SL-032-SA5A-SB-3.0-4.0 SL-172-SA5A-SB-4.0-5.0 SL-174-SA5A-SB-2.0-3.0 SL-254-SA5A-SB-2.5-3.5 EB13-SA5A-SB-041811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Semivolatiles- Laboratory Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Semivolatiles- Field Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

LDC #: 26078B2b **VALIDATION COMPLETENESS WORKSHEET** Date: 8/30/11
SDG #: DE130 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS ~~Polynuclear Aromatic Hydrocarbons~~ SVOA (EPA SW 846 Method 8270C-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/18/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30, r^2
IV.	Continuing calibration/ICV	SW	ICV/CCV ≤ 25
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	LCS ID
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	SW	EB = 8, 13

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil + water

1	SL-056-SA8N-SS-0.0-0.05 S	11	SL-174-SA5A-SB-2.0-3.0 S	21	SBLKLA116	31	
2	SL-057-SA8N-SS-0.0-0.05	12	SL-254-SA5A-SB-2.5-3.5	22	SBLKWE110	32	
3	SL-071-SA8N-SS-0.0-0.05	13	EB13-SA5A-SB-041811 W	23		33	
4	SL-080-SA8N-SS-0.0-0.05	14		24		34	
5	SL-085-SA8N-SS-0.0-0.05	15		25		35	
6	SL-086-SA8N-SS-0.0-0.05	16		26		36	
7	SL-132-SA8N-SS-0.0-0.05	17		27		37	
8	EB05-SA8N-SS-041811 W	18		28		38	
9	SL-032-SA5A-SB-3.0-4.0 S	19		29		39	
10	SL-172-SA5A-SB-4.0-5.0	20		30		40	

LDC #: 26078B2b

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
VI. Surrogates				
Were all surrogate %R within QC limits?	✓			
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 26078B2b

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
X. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds from the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation [illegible]				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XI. [illegible]				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
[illegible]				
System performance was found to be acceptable.	✓			
[illegible]				
Overall assessment of data was found to be acceptable.	✓			
[illegible]				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
[illegible]				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA Method 8270)

A. Phenol	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol	III. Benzo(a)pyrene
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene	T. 4-Chloroaniline	II. 4-Nitrophenol	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene	JJ. Dibenzofuran	YY. Fluoranthene	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine	Y. 2,4,6-Trichlorophenol	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. 1-Methylnaphthalene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)	FFF. Di-n-octylphthalate	UUU.
N. 2-Nitrophenol	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 26078B2b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours of sample analysis for each instrument?
Y N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?
Y N N/A Were all %D and RRFs within the validation criteria of ≤25 %D and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤25.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	4/15/11	ICV	FFF	26		All	J/UJ/A
			GGG	30		↓	↓

CONCAL.2S

LDC #: 26078 B2b

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were field blanks identified in this SDG?
Y N N/A Were target compounds detected in the field blanks?

Blank units: ug/L **Associated sample units:** ug/L
Sampling date: 4/18/11
Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: 1 → 7 (ND)

Compound	Blank ID	Sample Identification								
	8									
AAA	0.33									
XX	0.37									
EEE	0.72									
FFF	0.52									

Blank units: ug/L **Associated sample units:** ug/L
Sampling date: 4/18/11
Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: 9 → 12 (ND)

Compound	Blank ID	Sample Identification								
	13									
XX	0.32									
EEE	0.30									
S	0.031									
FFF	0.27									
CRQL										

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as the phthalates and TICs noted above that were detected in samples within ten times the associated field blank concentration were qualified as not detected, "U". Other contaminants within five times the field blank concentration were also qualified as not detected, "U".

LDC #: 26078B2b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard
S = Standard deviation of the RRFs, X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (std)	Recalculated RRF (std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ccv	4/15/11	~~Phenol (1st internal standard)~~						
			Naphthalene (2nd internal standard) ✓	1.061	1.061	1.029	1.029	4	4
			Fluorene (3rd internal standard) ✓	1.310	1.310	1.260	1.260	7	7
			~~Pentachlorophenol~~ Anthracene (4th internal standard) •	1.119	1.119	1.080	1.080	9	9
			~~Bis(2-ethylhexyl)phthalate~~ Chrysene (5th internal standard)	1.188	1.188	1.146	1.146	4	4
			Benzo(a)pyrene (6th internal standard)	1.092	1.092	1.034	1.034	12	12
2			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						
3			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B2b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV	4/21/11	~~Phenol (1st internal standard)~~					
			Naphthalene (2nd internal standard)	1.029	1.008	1.008	2	2
			Fluorene (3rd internal standard)	1.260	1.262	1.262	0	0
			~~Pentachlorophenol~~ Anthracene (4th internal standard)	1.080	1.113	1.113	~~3~~ 3	3
			~~Bis(2-ethylhexyl)phthalate~~ Chrysene (5th internal standard)	1.146	1.121	1.121	2	2
			Benzo(a)pyrene (6th internal standard)	1.034	1.115	1.115	8	8
2	CCV	4/27/11 7:26	~~Phenol (1st internal standard)~~					
			Naphthalene (2nd internal standard)		1.033	1.033	0	0
			Fluorene (3rd internal standard)		1.249	1.249	1	1
			~~Pentachlorophenol~~ Anthracene (4th internal standard)		1.090	1.090	1	1
			~~Bis(2-ethylhexyl)phthalate~~ Chrysene (5th internal standard)		1.170	1.170	2	2
			Benzo(a)pyrene (6th internal standard)		1.081	1.081	5	5
3	CCV	4/27/11 9:21	~~Phenol (1st internal standard)~~					
			Naphthalene (2nd internal standard)		1.024	1.024	0	0
			Fluorene (3rd internal standard)		1.295	1.295	3	3
			~~Pentachlorophenol~~ Anthracene (4th internal standard)		1.169	1.169	8	8
			~~Bis(2-ethylhexyl)phthalate~~ Chrysene (5th internal standard)		1.164	1.164	2	2
			Benzo(a)pyrene (6th internal standard)		1.138	1.138	10	10

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B2b

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: A

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	1.0	0.943	91 / 94	94	0
2-Fluorobiphenyl	↓	0.845	84 / 85	85	↓
Terphenyl-d14		0.795	87 / 80	80	
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 26078B2b

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 1160LA.LCS

Compound	Spike Added (ug/kg)		Spike Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene	33.33	NA	32.21	NA	97	97				
Pentachlorophenol										
Pyrene	33.33	↓	32.26	NA	97	97	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B2b

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_t	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. #1, Benzo(b)fluoranthene

Conc. = $\frac{(3868)(1)(1000)(\quad)(\quad)}{(535270)(1.078)(30)(0.857)(\quad)}$

=

2.6 ug/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 18, 2011

LDC Report Date: August 31, 2011

Matrix: Soil/Water

Parameters: N-Nitrosodimethylamine

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE130

Sample Identification

SL-056-SA8N-SS-0.0-0.05
SL-057-SA8N-SS-0.0-0.05
SL-071-SA8N-SS-0.0-0.05
SL-080-SA8N-SS-0.0-0.05
SL-085-SA8N-SS-0.0-0.05
SL-132-SA8N-SS-0.0-0.05
EB05-SA8N-SS-041811

Introduction

This data review covers 6 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 1625C for N-Nitrosodimethylamine.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance check is not required for by this method.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% .

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration all compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 30.0% for all compounds.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No N-nitrosodimethylamine was found in the method blanks.

Sample EB05-SA8N-SS-041811 was identified as an equipment blank. No N-nitrosodimethylamine was found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Surrogate	%R (Limits)	Compound	Flag	A or P
EB05-SA8N-SS-041811	N-nitrosodimethylamine-d6	171 (50-150)	N-nitrosodimethylamine	J (all detects)	A

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
110WLCS/D (All water samples in SDG DE130)	N-nitrosodimethylamine	60 (70-130)	-	-	J (all detects) UJ (all non-detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE130	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was within validation criteria.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
N-Nitrosodimethylamine - Data Qualification Summary - SDG DE130

SDG	Sample	Compound	Flag	A or P	Reason
DE130	EB05-SA8N-SS-041811	N-nitrosodimethylamine	J (all detects)	A	Surrogate spikes (%R) (S)
DE130	EB05-SA8N-SS-041811	N-nitrosodimethylamine	J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R) (L)
DE130	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 EB05-SA8N-SS-041811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
N-Nitrosodimethylamine - Laboratory Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
N-Nitrosodimethylamine - Field Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

LDC #: 26078B2c **VALIDATION COMPLETENESS WORKSHEET** Date: 8/29/11
SDG #: DE130 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: JT
2nd Reviewer:

METHOD: GC/MS N-Nitrosodimethylamine (EPA Method 1625C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/18/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30
IV.	Continuing calibration/ICV	A	CCV ≤ 20 ICV ≤ 30
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	SW	LCS ID
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	EB = 7

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil + water

1	SL-056-SA8N-SS-0.0-0.05 S	11	SBLKLG110	21		31	
2	SL-057-SA8N-SS-0.0-0.05	12	SBLKWF110	22		32	
3	SL-071-SA8N-SS-0.0-0.05	13		23		33	
4	SL-080-SA8N-SS-0.0-0.05	14		24		34	
5	SL-085-SA8N-SS-0.0-0.05	15		25		35	
6	SL-132-SA8N-SS-0.0-0.05	16		26		36	
7	EB05-SA8N-SS-041811 W	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 26078B2c

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	NA		✓	
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	NA		✓	
Were all percent differences (%D) ≤ ~~25%~~ 20 and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	NA	✓		
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?	✓			
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicate				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. LCS				
Was an LCS analyzed for this SDG?	✓			

LDC #: 26078B2C

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds from the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?			✓	
Did compound spectra meet specified EPA "Functional Guidelines" criteria?			✓	
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?			✓	
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA Method 8270)

A. Phenol	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol	III. Benzo(a)pyrene
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene	T. 4-Chloroaniline	II. 4-Nitrophenol	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene	JJ. Dibenzofuran	YY. Fluoranthene	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine	Y. 2,4,6-Trichlorophenol	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. 1-Methylnaphthalene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)	FFF. Di-n-octylphthalate	UUU.
N. 2-Nitrophenol	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 26078B2C

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were percent recoveries (%R) for surrogates within QC limits?
Y N N/A If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?
Y N N/A If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Date	Sample ID	Surrogate	%R (Limits)	Qualifications
		7	*	171 (50-150)	J/A det (s)
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
		* N-Nitrosodimethylamine-d6		( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

* QC limits are advisory	QC Limits (Soil)	QC Limits (Water)		QC Limits (Soil)	QC Limits (Water)
S1 (NBZ) = Nitrobenzene-d5	23-120	35-114	S5 (2FP)= 2-Fluorophenol	25-121	21-100
S2 (FBP) = 2-Fluorobiphenyl	30-115	43-116	S6 (TBP) = 2,4,6-Tribromophenol	19-122	10-123
S3 (TPH) = Terphenyl-d14	18-137	33-141	S7 (2CP) = 2-Chlorophenol-d4	20-130*	33-110*
S4 (PHL) = Phenol-d5	24-113	10-94	S8 (DCB) = 1,2-Dichlorobenzene-d4	20-130*	16-110*

LDC #: 26078B2C

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

[✓ Y] N N/A Was a LCS required?

Y [✓ N] N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		110WLcs/D	*	60 (70-130)	( )	( )	All water	J/UJ/P (L)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
		N-Nitrosodimethylamine		( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC #: 26078B2C

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard
S = Standard deviation of the RRFs, X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (25 std)	Recalculated RRF (25 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	4/20/11	~~Phenol (1st internal standard)~~ N-nitrosodimethylamine	1.489	1.489	1.520	1.520	9	9
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						
2			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						
3			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B2C

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV	4/28/11	N-Nitrosodimethylamine	0.51736	0.53164	0.53164	2.76032	2.76032
		10:34	Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
	CCV	4/28/11	Pentachlorophenol (4th internal standard)	↓	0.45443	0.45443	12.16301	12.16301
		17:20	Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
2	CCV	4/21/11	Phenol (1st internal standard)	↓	0.46929	0.46929	9.29	9.29
		11:28	Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
	CCV	4/21/11	Pentachlorophenol (4th internal standard)	↓	0.46818	0.46819	9.505	9.505
		13:40	Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
3			Phenol (1st internal standard)	↓	0.46648	0.46648	9.83368	9.83368
	CCV	4/28/11	Naphthalene (2nd internal standard)					
		20:23	Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B2C

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer:

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
~~Nitrobenzene-d5~~ N-Nitrosodimethylamine-d6	25	31.104	124	124	0
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
~~1,2-Dichlorobenzene-d4~~					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 26078B2C

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 1 LCS SOIL

Compound	Spike Added (ng/kg)		Spike Concentration (ng/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene										
Pentachlorophenol										
Pyrene										
N-Nitrosodimethylamine	833.33	NA	616.11	NA	74	74	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B2C

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

V_o = Volume or weight of sample extract in milliliters (ml) or grams (g).

V_i = Volume of extract injected in microliters (ul)

V_t = Volume of the concentrated extract in microliters (ul)

Df = Dilution Factor.

%S = Percent solids, applicable to soil and solid matrices only.

2.0 = Factor of 2 to account for GPC cleanup

Example:

Sample I.D. _____, _____:

Conc. = $\frac{(\quad)(\quad)(\quad)(\quad)(\quad)(\quad)}{(\quad)(\quad)(\quad)(\quad)(\quad)(\quad)}$

= ND

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 18, 2011

LDC Report Date: August 31, 2011

Matrix: Soil/Water

Parameters: Polychlorinated Biphenyls

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE130

Sample Identification

SL-056-SA8N-SS-0.0-0.05
SL-057-SA8N-SS-0.0-0.05
SL-071-SA8N-SS-0.0-0.05
SL-080-SA8N-SS-0.0-0.05
SL-085-SA8N-SS-0.0-0.05
SL-086-SA8N-SS-0.0-0.05
SL-132-SA8N-SS-0.0-0.05
EB05-SA8N-SS-041811
SL-032-SA5A-SB-3.0-4.0
SL-172-SA5A-SB-4.0-5.0
SL-174-SA5A-SB-2.0-3.0
SL-254-SA5A-SB-2.5-3.5
EB13-SA5A-SB-041811
SL-056-SA8N-SS-0.0-0.05MS
SL-056-SA8N-SS-0.0-0.05MSD

Introduction

This data review covers 13 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8082 for Polychlorinated Biphenyls.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

III. Initial Calibration

Initial calibration of multicomponent compounds was performed for the primary (quantitation) column as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

Retention time windows were evaluated and considered technically acceptable.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits with the following exceptions:

Date	Standard	Column	Compound	%D	Associated Samples	Affected Compound	Flag	A or P
4/25/11	CCV	ZBmultiR2	Aroclor-5432	20.4	All water samples in SDG DE130	Aroclor-5432	J (all detects) UJ (all non-detects)	A
4/26/11 (14:17)	CCV	ZBmultiR2	Aroclor-5432	29.8	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-086-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 SL-032-SA5A-SB-3.0-4.0 SL-172-SA5A-SB-4.0-5.0 SL-056-SA8N-SS-0.0-0.05MS SL-056-SA8N-SS-0.0-0.05MSD PBLK07112	Aroclor-5432	J (all detects) UJ (all non-detects)	A
4/26/11 (21:42)	CCV	ZBmultiR2	Aroclor-5432	25.6	SL-174-SA5A-SB-2.0-3.0 SL-254-SA5A-SB-2.5-3.5	Aroclor-5432	J (all detects) UJ (all non-detects)	A

The percent difference (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No polychlorinated biphenyl contaminants were found in the method blanks.

Samples EB05-SA8N-SS-041811 and EB13-SA5A-SB-041811 were identified as equipment blanks. No polychlorinated biphenyl contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Column	Surrogate	%R (Limits)	Compound	Flag	A or P
SL-172-SA5A-SB-4.0-5.0	Not specificed	Decachlorobiphenyl	129 (45-120)	All TCL compounds	J (all detects)	P
SL-174-SA5A-SB-2.0-3.0	Not specificed	Decachlorobiphenyl	132 (45-120)	All TCL compounds	J (all detects)	P
SL-254-SA5A-SB-2.5-3.5	Not specificed	Decachlorobiphenyl	130 (45-120)	All TCL compounds	J (all detects)	P
EB13-SA5A-SB-041811	Not specificed	Decachlorobiphenyl	125 (45-120)	All TCL compounds	J (all detects)	P

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Compounds	Flag	A or P
LCS/LCSD24111 (All water samples in SDG DE130)	Aroclor-5442	92 (35-84)	96 (35-84)	-	Aroclor-5432 Aroclor-5442 Aroclor-5460	J (all detects) J (all detects) J (all detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

XI. GPC Calibration

GPC cleanup was not required and therefore not performed in this SDG.

XII. Target Compound Identification

All target compound identifications were within validation criteria.

XIII. Compound Quantitation and Reported RLs

All compound quantitation and RLs were within validation criteria.

The sample results for detected compounds from the two columns were within 40% relative percent difference (RPD) with the following exceptions:

Sample	Compound	RPD	Flag	A or P
SL-056-SA8N-SS-0.0-0.05	Aroclor-1254	45	J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE130	All compounds reported below the RL.	J (all detects)	A

XIV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XV. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Data Qualification Summary - SDG DE130

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE130	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-086-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 EB05-SA8N-SS-041811 SL-032-SA5A-SB-3.0-4.0 SL-172-SA5A-SB-4.0-5.0 SL-174-SA5A-SB-2.0-3.0 SL-254-SA5A-SB-2.5-3.5 EB13-SA5A-SB-041811	Aroclor-5432	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
DE130	SL-172-SA5A-SB-4.0-5.0 SL-174-SA5A-SB-2.0-3.0 SL-254-SA5A-SB-2.5-3.5 EB13-SA5A-SB-041811	All TCL compounds	J (all detects)	P	Surrogate spikes (%R) (S)
DE130	EB05-SA8N-SS-041811 EB13-SA5A-SB-041811	Aroclor-5432 Aroclor-5442 Aroclor-5460	J (all detects) J (all detects) J (all detects)	P	Laboratory control samples (%R) (L)
DE130	SL-056-SA8N-SS-0.0-0.05	Aroclor-1254	J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE130	SL-199-SA5A-SB-2.5-3.5 SL-223-SA5A-SB-4.0-5.0 SL-223-SA5A-SB-8.5-9.5 DUP10-SA5A-QC-032411 SL-226-SA5A-SB-4.0-5.0 SL-225-SA5A-SB-4.0-5.0 SL-224-SA5A-SB-4.0-5.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Field Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

LDC #: 26078B3b **VALIDATION COMPLETENESS WORKSHEET** Date: 8/30/11
SDG #: DE130 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: F
2nd Reviewer: A

METHOD: GC Polychlorinated Biphenyls (EPA SW 846 Method 8082)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/18/11
II.	GC/ECD Instrument Performance Check	NA	
III.	Initial calibration	A	% RSD ≤ 20
IV.	Continuing calibration/ICV	SW	ICV/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	SW	LCS/D
IX.	Regional quality assurance and quality control	N	
X.	Florisil cartridge check	N	
XI.	GPC Calibration	N	
XII.	Target compound identification	A	
XIII.	Compound quantitation/RL/LOQ/LODs	SW	
XIV.	Overall assessment of data	A	
XV.	Field duplicates	N	
XVI.	Field blanks	NP	EB = 8, 13

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:
SOIL + WATER

1	SL-056-SA8N-SS-0.0-0.05 S	11	SL-174-SA5A-SB-2.0-3.0 S	21	PBLK07112	31	
2	SL-057-SA8N-SS-0.0-0.05	12	SL-254-SA5A-SB-2.5-3.5	22	PBLK24111	32	
3	SL-071-SA8N-SS-0.0-0.05	13	EB13-SA5A-SB-041811 W	23		33	
4	SL-080-SA8N-SS-0.0-0.05	14	#1 MS	24		34	
5	SL-085-SA8N-SS-0.0-0.05	15	#1 MSD	25		35	
6	SL-086-SA8N-SS-0.0-0.05	16		26		36	
7	SL-132-SA8N-SS-0.0-0.05	17		27		37	
8	EB05-SA8N-SS-041811 W	18		28		38	
9	SL-032-SA5A-SB-3.0-4.0 S	19		29		39	
10	SL-172-SA5A-SB-4.0-5.0	20		30		40	

Notes:

LDC #: 26078B36
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: EJ
2nd Reviewer: A

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26078B3h
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

LDC #: 26078B3b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT

METHOD: ✓ GC __ HPLC

2nd Reviewer: A

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
What type of continuing calibration calculation was performed? ___%D or __RPD
Y N N/A Were continuing calibration standards analyzed at the required frequencies?
Y N N/A Did the continuing calibration standards meet the %D / RPD validation criteria of ≤20.0%?
Level IV Only
Y N N/A Were the retention times for all calibrated compounds within their respective acceptance windows?

#	Date	Standard ID	Detector/ Column	Compound	%D (Limit ≤ 20.0)	RT (limit)	Associated Samples	Qualifications
	4/25/11 18:52	CCV	ZBmultiR2	Aroclor 5432	20.4	( )	All water	J/UJ/A (C) qual 5432 only
						( )		
						( )		
	4/26/11 14:17	CCV	↓	↓	29.8	( )	PBLK07112, 1-7, 9, 10, 14, 15	J/UJ/A (C) qual 5432 only
						( )		
						( )		
						( )		
						( )		
	4/26/11 21:42	CCV	↓	↓	35.6	( )	11, 12	↓
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		

LDC #: 26078B3b

VALIDATION FINDINDS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: / GC __ HPLC
Are surrogates required by the method? Yes___ or No___.
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y N N/A Were surrogates spiked into all samples and blanks?
Y N N/A Did all surrogate recoveries (%R) meet the QC limits?

#	Sample ID	Detector/ Column	Surrogate Compound	%R (Limits)	Qualifications
	5	VG	O	135 (45-120)	no qual SxDL
				( )	
				( )	
	10			129 (45-120)	J/Pdt (S)
				( )	
	11			132 (↓)	↓ ↓
				( )	
	12	↓	↓	130 (45-120)	↓ ↓
				( )	
				( )	
	13	↓	O	125 (45-120)	J/Pdt (S)
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene		
C	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin		
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin		
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate		
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

LDC #: 26078B3b

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer: C

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

[✓ Y] N N/A Were a laboratory control samples (LCS) and laboratory control sample duplicate (LCSD) analyzed for each matrix in this SDG?

Y [✓ N] N/A Were the LCS percent recoveries (%R) and relative percent differences (RPD) within the QC limits?

Level IV/D Only

[✓ Y] N N/A Was an LCS analyzed every 20 samples for each matrix or whenever a sample extraction was performed?

#	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	LCS/LCSD 24111	Aroclor 5442	92 (35-84)	96 (35-84)	( )	All water	J/Pdet (L)
			( )	( )	( )	qual	(Aroclor 5442 only)
			( )	( )	( )		5432 5460
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 26078B3b
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: F7
2nd Reviewer:

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	Finding %RPD Bet 2 col ≤40	Associated Samples	Qualifications
	AA	45	1	J/A dlt *

Comments: See sample calculation verification worksheet for recalculations

LDC #: 26078B3b
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FJ
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (200 std)	Recalculated CF (200 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL ICC0104	4/14/11	Aroclor 1260-1 ZBmulti R1	40	40	~~40~~ 39	39	11.0	11.0
			ZBmulti R2	179	179	175	175	11.8	11.8
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B3h
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: C

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	ccv	4/25/11 18:34	Aroclor 1260 ZBR1	200	206.71	206.71	3.4	3.4
			ZBR2	200	232.57	232.57	16.3	16.3
2	ccv	4/26/11 13:58	Aroclor 1260 ↓	200	218.31	218.31	9.2	9.2
			↓	200	235.98	235.98	18.0	18.0
3	ccv	4/26/11 21:24	↓	200	204.52	204.52	2.3	2.3
			↓	↓	228.15	228.15	14.1	14.1
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B57
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer:

METHOD: GC __ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
		104		Reported	Recalculated	
TCMX	ZB R1	~~1.0399~~	1.106803	103	103	0
PCB	ZB R2	1.04	1.133739	109	109	0

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 26078B3h
SDG #: pw covers

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer: FZ
2nd Reviewer: CT

METHOD: ✓ **GC** **HPLC**

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added
RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 14 + 15

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	—	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
PCB - 1260	16.64	16.64		20.15	19.16	121	121	115	115	5	5

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B3b
SDG #: pu covers

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
SC = Concentration
LCS = Laboratory control sample percent recovery
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
PCB - 1260	16.67	NA	18.84	NA	113	113	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B3h
SDG #: pu grave

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: F
2nd Reviewer: A

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #1 Compound Name PCB 1254

Concentration = $\frac{2.7902}{(0.857)}$ (final)

= 3.3 ug/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications
	1254-1 = 2159.903564	(2000)	= 0.8262		
	87	(60.1)(0.857)(1000)		Aroclor 1254-1 = 0.8262	
					= 2.315944
					= 3.165529
					= 3.741602
					= 3.901961
					2.790247

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	April 18, 2011
LDC Report Date:	September 2, 2011
Matrix:	Soil/Water
Parameters:	Metals
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE130

Sample Identification

SL-056-SA8N-SS-0.0-0.05
SL-057-SA8N-SS-0.0-0.05
SL-071-SA8N-SS-0.0-0.05
SL-080-SA8N-SS-0.0-0.05
SL-085-SA8N-SS-0.0-0.05
SL-086-SA8N-SS-0.0-0.05
SL-132-SA8N-SS-0.0-0.05
EB05-SA8N-SS-041811
SL-032-SA5A-SB-3.0-4.0
SL-172-SA5A-SB-4.0-5.0
SL-174-SA5A-SB-2.0-3.0
SL-254-SA5A-SB-2.5-3.5
EB13-SA5A-SB-041811

Introduction

This data review covers 11 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6010B, 6020A, 7470A, and 7471A for Metals. The metals analyzed were Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Mercury, Nickel, Phosphorus, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, and Zirconium.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

The mass calibration was within 0.1 AMU and the percent relative standard deviation (%RSD) was less than or equal to 5% .

III. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No metal contaminants were found in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
PB (prep blank)	Boron	15.590 ug/L	All water samples in SDG DE130
ICB/CCB	Copper Lead	0.24 ug/L 0.071 ug/L	All water samples in SDG DE130
ICB/CCB	Copper Lithium Titanium	1.0 ug/L 3.1 ug/L 2.0 ug/L	All soil samples in SDG DE130
PB (prep blank)	Phosphorus Tin Vanadium	1.256 mg/Kg 1.478 mg/Kg 0.053 mg/Kg	All soil samples in SDG DE130
ICB/CCB	Vanadium	0.21 ug/L	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-086-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 SL-032-SA5A-SB-3.0-4.0 SL-172-SA5A-SB-4.0-5.0
ICB/CCB	Vanadium	0.30 ug/L	SL-174-SA5A-SB-2.0-3.0 SL-254-SA5A-SB-2.5-3.5

Data qualification by the initial, continuing and preparation blanks (ICB/CCB/PBs) was based on the maximum contaminant concentration in the ICB/CCB/PBs in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
EB05-SA8N-SS-041811	Boron	22.1 ug/L	22.1U ug/L
EB13-SA5A-SB-041811	Boron	15.1 ug/L	15.1U ug/L
SL-056-SA8N-SS-0.0-0.05	Tin	2.7 mg/Kg	2.7U mg/Kg
SL-057-SA8N-SS-0.0-0.05	Tin	2.6 mg/Kg	2.6U mg/Kg
SL-071-SA8N-SS-0.0-0.05	Tin	2.8 mg/Kg	2.8U mg/Kg
SL-080-SA8N-SS-0.0-0.05	Tin	2.5 mg/Kg	2.5U mg/Kg
SL-085-SA8N-SS-0.0-0.05	Tin	2.6 mg/Kg	2.6U mg/Kg
SL-086-SA8N-SS-0.0-0.05	Tin	2.5 mg/Kg	2.5U mg/Kg
SL-132-SA8N-SS-0.0-0.05	Tin	2.6 mg/Kg	2.6U mg/Kg
SL-032-SA5A-SB-3.0-4.0	Tin	3.0 mg/Kg	3.0U mg/Kg
SL-172-SA5A-SB-4.0-5.0	Tin	2.8 mg/Kg	2.8U mg/Kg
SL-174-SA5A-SB-2.0-3.0	Tin	2.9 mg/Kg	2.9U mg/Kg
SL-254-SA5A-SB-2.5-3.5	Tin	3.0 mg/Kg	3.0U mg/Kg

Samples EB05-SA8N-SS-041811 and EB13-SA5A-SB-041811 were identified as equipment blanks. No metal contaminants were found with the following exceptions:

Equipment Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
EB05-SA8N-SS-041811	4/18/11	Boron Calcium	22.1 ug/L 94.9 ug/L	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-086-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05

Equipment Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
EB13-SA5A-SB-041811	4/18/11	Boron	15.1 ug/L	SL-032-SA5A-SB-3.0-4.0 SL-172-SA5A-SB-4.0-5.0 SL-174-SA5A-SB-2.0-3.0 SL-254-SA5A-SB-2.5-3.5

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated field blanks with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
SL-056-SA8N-SS-0.0-0.05	Boron	6.5 mg/Kg	6.5U mg/Kg
SL-057-SA8N-SS-0.0-0.05	Boron	8.3 mg/Kg	8.3U mg/Kg
SL-071-SA8N-SS-0.0-0.05	Boron	1.6 mg/Kg	1.6U mg/Kg
SL-080-SA8N-SS-0.0-0.05	Boron	7.0 mg/Kg	7.0U mg/Kg
SL-085-SA8N-SS-0.0-0.05	Boron	2.4 mg/Kg	2.4U mg/Kg
SL-086-SA8N-SS-0.0-0.05	Boron	8.3 mg/Kg	8.3U mg/Kg
SL-132-SA8N-SS-0.0-0.05	Boron	5.0 mg/Kg	5.0U mg/Kg

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-148-SA5A-SB-4.0-5.0MS/MSD (All soil samples in SDG DE130)	Antimony	51 (75-125)	41 (75-125)	-	J (all detects) UJ (all non-detects)	A
	Arsenic	-	68 (75-125)	-	J (all detects) UJ (all non-detects)	
SL-148-SA5A-SB-4.0-5.0MS/MSD (All soil samples in SDG DE130)	Potassium	131 (75-125)	139 (75-125)	-	J (all detects)	A
	Vanadium	130 (75-125)	-	-	J (all detects)	

VII. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Internal Standards

All internal standard percent recoveries (%R) were within QC limits.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met with the following exceptions:

Diluted Sample	Analyte	%D (Limits)	Associated Samples	Flag	A or P
SL-148-SA5A-SB-4.0-5.0	Chromium	13 (≤10)	All soil samples in SDG DE130	J (all detects) UJ (all non-detects)	A
	Cobalt	14 (≤10)			
	Copper	30 (≤10)			
	Lead	11 (≤10)			
	Nickel	11 (≤10)			
	Vanadium	16 (≤10)			

XII. Sample Result Verification

All sample result verifications were acceptable.

All metals reported below the RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG DE130	All analytes reported below the RL and above the MDL.	J (all detects)	A

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Metals - Data Qualification Summary - SDG DE130

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
DE130	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-086-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 SL-032-SA5A-SB-3.0-4.0 SL-172-SA5A-SB-4.0-5.0 SL-174-SA5A-SB-2.0-3.0 SL-254-SA5A-SB-2.5-3.5	Antimony Arsenic	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE130	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-086-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 SL-032-SA5A-SB-3.0-4.0 SL-172-SA5A-SB-4.0-5.0 SL-174-SA5A-SB-2.0-3.0 SL-254-SA5A-SB-2.5-3.5	Potassium Vanadium	J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE130	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-086-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 SL-032-SA5A-SB-3.0-4.0 SL-172-SA5A-SB-4.0-5.0 SL-174-SA5A-SB-2.0-3.0 SL-254-SA5A-SB-2.5-3.5	Chromium Cobalt Copper Lead Nickel Vanadium	J (all detects) UJ (all non-detects)	A	ICP serial dilution (%D) (A)
DE130	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-086-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 EB05-SA8N-SS-041811 SL-032-SA5A-SB-3.0-4.0 SL-172-SA5A-SB-4.0-5.0 SL-174-SA5A-SB-2.0-3.0 SL-254-SA5A-SB-2.5-3.5 EB13-SA5A-SB-041811	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification (Z)

Santa Susana Field Laboratory
Metals - Laboratory Blank Data Qualification Summary - SDG DE130

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
DE130	EB05-SA8N-SS-041811	Boron	22.1U ug/L	A	B
DE130	EB13-SA5A-SB-041811	Boron	15.1U ug/L	A	B
DE130	SL-056-SA8N-SS-0.0-0.05	Tin	2.7U mg/Kg	A	B
DE130	SL-057-SA8N-SS-0.0-0.05	Tin	2.6U mg/Kg	A	B
DE130	SL-071-SA8N-SS-0.0-0.05	Tin	2.8U mg/Kg	A	B
DE130	SL-080-SA8N-SS-0.0-0.05	Tin	2.5U mg/Kg	A	B
DE130	SL-085-SA8N-SS-0.0-0.05	Tin	2.6U mg/Kg	A	B
DE130	SL-086-SA8N-SS-0.0-0.05	Tin	2.5U mg/Kg	A	B
DE130	SL-132-SA8N-SS-0.0-0.05	Tin	2.6U mg/Kg	A	B
DE130	SL-032-SA5A-SB-3.0-4.0	Tin	3.0U mg/Kg	A	B
DE130	SL-172-SA5A-SB-4.0-5.0	Tin	2.8U mg/Kg	A	B
DE130	SL-174-SA5A-SB-2.0-3.0	Tin	2.9U mg/Kg	A	B
DE130	SL-254-SA5A-SB-2.5-3.5	Tin	3.0U mg/Kg	A	B

Santa Susana Field Laboratory
Metals - Field Blank Data Qualification Summary - SDG DE130

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
DE130	SL-056-SA8N-SS-0.0-0.05	Boron	6.5U mg/Kg	A	F
DE130	SL-057-SA8N-SS-0.0-0.05	Boron	8.3U mg/Kg	A	F
DE130	SL-071-SA8N-SS-0.0-0.05	Boron	1.6U mg/Kg	A	F
DE130	SL-080-SA8N-SS-0.0-0.05	Boron	7.0U mg/Kg	A	F
DE130	SL-085-SA8N-SS-0.0-0.05	Boron	2.4U mg/Kg	A	F

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
DE130	SL-086-SA8N-SS-0.0-0.05	Boron	8.3U mg/Kg	A	F
DE130	SL-132-SA8N-SS-0.0-0.05	Boron	5.0U mg/Kg	A	F

LDC #: 26078B4 **VALIDATION COMPLETENESS WORKSHEET** Date: 8/29/11
SDG #: DE130 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: CR
2nd Reviewer:

METHOD: Metals (EPA SW 846 Method 6010B/6020A~~7000~~) 7470A/7471A

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/18/11
II.	ICP/MS Tune	A	
III.	Calibration	A	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	SW	
VI.	Matrix Spike Analysis	SW	MS/D (SD6: DE133)
VII.	Duplicate Sample Analysis	A	DUP ↓
VIII.	Laboratory Control Samples (LCS)	A	LCS/D
IX.	Internal Standard (ICP-MS)	A	
X.	Furnace Atomic Absorption QC	N	Not utilized
XI.	ICP Serial Dilution	SW	(SD6: DE133)
XII.	Sample Result Verification	A	
XIII.	Overall Assessment of Data	A	
XIV.	Field Duplicates	N	
XV	Field Blanks	SW	EB= 8, 13

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Soil/Water

1	SL-056-SA8N-SS-0.0-0.05	11	SL-174-SA5A-SB-2.0-3.0	21		31	
2	SL-057-SA8N-SS-0.0-0.05	12	SL-254-SA5A-SB-2.5-3.5	22		32	
3	SL-071-SA8N-SS-0.0-0.05	13	EB13-SA5A-SB-041811 W	23		33	
4	SL-080-SA8N-SS-0.0-0.05	14		24		34	
5	SL-085-SA8N-SS-0.0-0.05	15		25		35	
6	SL-086-SA8N-SS-0.0-0.05	16		26		36	
7	SL-132-SA8N-SS-0.0-0.05	17		27		37	
8	EB05-SA8N-SS-041811 W	18		28		38	
9	SL-032-SA5A-SB-3.0-4.0	19		29		39	
10	SL-172-SA5A-SB-4.0-5.0	20		30		40	

Notes:

LDC #: 26078B4

VALIDATION FINDINGS CHECKLIST

Reviewer: CR
2nd Reviewer: W

Method: Metals (EPA SW 846 Method 6010B/7000/6020)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. ICP/MS Tune				
Were all isotopes in the tuning solution mass resolution within 0.1 amu?	✓			
Were %RSD of isotopes in the tuning solution ≤5%?	✓			
III. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury) QC limits?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
IV. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
V. ICP Interference Check Sample				
Were ICP interference check samples performed daily?	✓			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	✓			
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.		✓		
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of +/- RL(+/-2X RL for soil) was used for samples that were ≤ 5X the RL, including when only one of the duplicate sample values were ≤ 5X the RL.	✓			
VII. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	✓			

DC #: 26078B4

VALIDATION FINDINGS CHECKLIST

Reviewer: AE
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
VIII. Furnace Atomic Absorption QC				
If MSA was performed, was the correlation coefficients > 0.995?			✓	
Do all applicable analysies have duplicate injections? (Level IV only)			✓	
For sample concentrations > RL, are applicable duplicate injection RSD values < 20%? (Level IV only)			✓	
Were analytical spike recoveries within the 85-115% QC limits?			✓	
IX. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the MDL (ICP)/>100X the MDL(ICP/MS)?	✓			
Were all percent differences (%Ds) < 10%?		✓		
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.		✓		
X. Internal Standards (EPA SW 846 Method 6020/EPA 200.8)				
Were all the percent recoveries (%R) within the 30-120% (6020)/60-125% (200.8) of the intensity of the internal standard in the associated initial calibration?	✓			
If the %Rs were outside the criteria, was a reanalysis performed?	✓			
XI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
XII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target analytes were detected in the field duplicates.	✓		✓	
XV. Field blanks				
Field blanks were identified in this SDG.	✓	✓		
Target analytes were detected in the field blanks.	✓		✓	

LDC #: 26078B4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Page: 1 of 1
Reviewer: CR
2nd reviewer:

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1-13		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr

		Analysis Method
ICP		Al, B, Ca, Fe, Li, Mg, Mn, P, K, Na, Sr, Sn, Ti, Zr
ICP-MS		Sb, As, Ba, Be, Cd, Cr, Co, Cu, Pb, Mo, Ni, Se, Ag, Tl, V, Zn

Comments: Mercury by CVAA if performed

LDC #: 26078B4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Reviewer: CC
2nd Reviewer: [illegible]

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000) Soil preparation factor applied: 100x x MS: 2xdil Reason: B
Sample Concentration units, unless otherwise noted: ug/L Associated Samples: All Water

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	8	13								
B		15.590		77.95	22.1	15.1								
Cu			0.24	1.2										
Pb			0.071	0.355										

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: All Soil

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	1	2	3	4	5	6	7	9	10	11	12
Cu			1.0	1											
Li			3.1	1.55											
P	1.256			6.28											
Sn	1.478			7.39	2.7	2.6	2.8	2.5	2.6	2.5	2.6	3.0	2.8	2.9	3.0
Ti			2.0	1											
V	0.053			0.265											

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 1-7, 9-10

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	No Qualifiers									
V			0.21	0.105										

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 11, 12

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	No Qualifiers									
V			0.30	0.15										

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".
Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC #: 26078B4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6010B/7000)

Y N N/A Were field blanks identified in this SDG?

Y N N/A Were target analytes detected in the field blanks?

8 : 1-7
13 : 9-12

Blank units: ug/L **Associated sample units:** mg/Kg

Sampling date: 4/18/11 Soil factor applied 100x

Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: ~~All Soil~~ Reason Code: F

Analyte	Blank ID	Blank ID	Sample Identification											
	8	13	Action Level	1	2	3	4	5	6	7				
B	22.1	15.1	11.05	6.5	8.3	1.6	7.0	2.4	8.3	5.0				
Ca	94.9		47.45											

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Samples with analyte concentrations within five times the associated field blank concentration are listed above, these sample results were qualified as not detected, "U".

LDC #: 26078B4

VALIDATION FINDINGS WORKSHEET
ICP Interference Check Sample

Reviewer: CR
2nd Reviewer:

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were ICP interference check samples performed as required?
Y N N/A Were the AB solution percent recoveries (%R) within the control limits of 80-120% ?
LEVEL IV ONLY:
Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Date	ICS Identification	Analyte	Concentration (ug/L)	Limit (<MDL)	Associated Samples	Qualifications
	4/29/11	ICSA (19:08/19:53)	Mn	4	0.84	All Water	No Qual (<90% ICSA)
	4/28/11	ICSA (9:31/03:42)	Mn	5	0.78	All Soil	No Qual (<10x)

Comments:

LDC #: 26078B1

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Trace metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was a matrix spike analyzed for each matrix in this SDG?

Y (N) N/A Were matrix spike percent recoveries (%R) within the control limits of 75-125? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

(Y) N N/A Were all duplicate sample relative percent differences (RPD) ≤ 20% for water samples and ≤35% for soil samples?

LEVEL IV ONLY:

(Y) N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	MS/MSD ID	Matrix	Analyte	MS %Recovery	MSD %Recovery	RPD (Limits)	Associated Samples	Qualifications
	SL-148-SA5A-MS	SB-4.0-5.0	Sb	51	41		All Soil	J (UJ/A) (CQ)
			As		68			
			IS	131	139			J det ND
			V	130				

Comments: _____

MSD.4SW

LDC #: 26078B4

VALIDATION FINDINGS WORKSHEET
ICP Serial Dilution

Page: 1 of 1
Reviewer: CR
2nd Reviewer:

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A If analyte concentrations were > 50X the MDL (ICP) ,or >100X the MDL (ICP/MS), was a serial dilution analyzed?
Y N N/A Were ICP serial dilution percent differences (%D) ≤10%?
Y N N/A Is there evidence of negative interference? If yes, professional judgement will be used to qualify the data.

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Date	Diluted Sample ID	Matrix	Analyte	%D (Limits)	Associated Samples	Qualifications
		SL-148-SA5A-SB4.0-5.0		Cr	13	All (Soil)	J/UJ/A (A)
				Co	14		
				Cu	30		
				Pb	11		
				Ni	11		
				V	16		

Comments:

LDC #: 26078B4

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: CS
2nd Reviewer:

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found / True x 100 Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated %R	Reported %R	Acceptable (Y/N)
ICV	ICP (Initial calibration)	Ti	587.4	600	97.9	97.9	Y
ICV	ICP/MS (Initial calibration)	Cu	506.10	500	101.2	101.2	
ICV	CVAA (Initial calibration)	Hg	2.52	2.5	100.8	100.8	
CCV3	ICP (Continuing calibration)	Sn	483.20	500	96.6	96.6	
CCV3	ICP/MS (Continuing calibration)	V	245.80	250	98.3	98.3	
CCV5	CVAA (Continuing calibration)	Hg	1.04	1	104	104	
	GFAA (Initial calibration)						
	GFAA (Continuing calibation)						

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26028B4

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: CR
2nd Reviewer:

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$

Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$

Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$\%D = \frac{|I-SDR|}{I} \times 100$

Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (~~units~~) mg/kg	True / D / SDR (~~units~~) mg/kg	Recalculated %R / RPD / %D	Reported %R / RPD / %D	Acceptable (Y/N)
ICSAB	ICP interference check	Zn	21.7 ug/L	20	108.5	108.5	Y
LCS	Laboratory control sample	Zn	1023.5	1000	102	102	
SL-148-SASA-SB40-5.0	Matrix spike	Al	(SSR-SR) 111.8377	108.8424	103	103	
	Duplicate	V	35.6588	36.1822	1	1	
	ICP serial dilution	Zn	233.9 ug/L	240.15 ug/L	3	3	

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 25961G4
26078B4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 3
Reviewer: AR
2nd reviewer: W

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for Al were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)}$

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

$$\frac{100mL \times (217.06286 mg/L)}{0.857\ (1.02g)} = 24832 mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	1	Al	24800	24800	Y
		Sb	0.23	0.23	
		As	6.2	6.2	
		Ba	130	130	
		Be	0.70	0.70	
		B	6.5	6.5	
		Cd	0.28	0.28	
		Ca	35500	35500	
		Cr	30.5	30.5	
		Co	10.3	10.3	
		Cu	16.9	16.9	
		Fe	31600	31600	
		Pb	10.7	10.7	
		Li	28.3	28.3	
		Mg	8120	8120	
		Mn	429	429	
		Hg	0.011	0.011	
		Mo	0.62	0.62	
		Ni	19.1	19.1	
		P	731	731	

Note:

LDC #: 26078B4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: CC
2nd reviewer:

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for As were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)}$

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

11= $\frac{100mL(25.7mg/L)(2)}{0.899(1.02g)(1000)} = 5.6\ mg/kg$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	1	K	6360	6360	Y
		Se	0.79	0.79	
		Ag	0.047	0.047	
		Na	131	131	
		Sr	73.3	73.3	
		Tl	0.31	0.31	
		Sn	2.7	2.7	
		Ti	1300	1300	
		V	57.9	57.9	
		Zn	81.1	81.1	
		Zr	2.6	2.6	
	11	Al	22100	22100	
		Sb	0.16	0.16	
		As	5.6	5.6	
		Ba	119	119	
		Be	0.90	0.90	
		Ca	3710	3710	
		Cr	25.9	25.9	
		Co	7.9	7.9	

Note:

LDC #: 25961B4
26078B4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 3 of 3
Reviewer: CC
2nd reviewer: V

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for _____ were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)}$

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

see Previous Page

#	Sample ID	Analyte	Reported Concentration mg/kg	Calculated Concentration mg/kg	Acceptable (Y/N)
	11	Cu	12.8	12.8	Y
		Fe	27900	27900	
		Pb	7.4	7.4	
		Li	28.9	28.9	
		Mg	7270	7270	
		Mn	268	268	
		Hg	0.012	0.012	
		Mo	0.46	0.46	
		Ni	14.4	14.4	
		P	485	485	
		K	3480	3480	
		Se	0.18	0.18	
		Ag	0.017	0.017	
		Na	122	122	
		Sr	22.6	22.6	
		Tl	0.36	0.36	
		Sn	2.9	2.9	
		Ti	1610	1610	
		V	45.2	45.2	
		Zn	75.7	75.7	

Note: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 18, 2011

LDC Report Date: September 2, 2011

Matrix: Soil/Water

Parameters: Wet Chemistry

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE130

Sample Identification

SL-056-SA8N-SS-0.0-0.05
SL-057-SA8N-SS-0.0-0.05
SL-071-SA8N-SS-0.0-0.05
SL-080-SA8N-SS-0.0-0.05
SL-085-SA8N-SS-0.0-0.05
SL-086-SA8N-SS-0.0-0.05
SL-132-SA8N-SS-0.0-0.05
EB05-SA8N-SS-041811
SL-032-SA5A-SB-3.0-4.0
SL-172-SA5A-SB-4.0-5.0
SL-174-SA5A-SB-2.0-3.0
SL-254-SA5A-SB-2.5-3.5
EB13-SA5A-SB-041811
SL-056-SA8N-SS-0.0-0.05MS
SL-056-SA8N-SS-0.0-0.05DUP
SL-132-SA8N-SS-0.0-0.05MS
SL-132-SA8N-SS-0.0-0.05DUP

Introduction

This data review covers 15 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 9012B for Cyanide, EPA Method 300.0 for Nitrate and Fluoride, EPA SW 846 Method 7199 for Hexavalent Chromium, and EPA Method 314.0 for Perchlorate.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

Sample EB05-SA8N-SS-041811 and EB13-SA5A-SB-041811 were identified as equipment blanks. No contaminant concentrations were found.

V. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	%R (Limits)	Flag	A or P
SL-056-SA8N-SS-0.0-0.05MS (SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-086-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 SL-032-SA5A-SB-3.0-4.0 SL-172-SA5A-SB-4.0-5.0 SL-174-SA5A-SB-2.0-3.0)	Fluoride	75 (80-120)	J (all detects) UJ (all non-detects)	A
SL-254-SA5A-SB-2.5-3.5MS (SL-254-SA5A-SB-2.5-3.5)	Fluoride	36 (80-120)	J (all detects) UJ (all non-detects)	A

VI. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Sample Result Verification

All sample result verifications were acceptable

All analytes reported below the RL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG DE130	All analytes reported below the RL and above the MDL.	J (all detects)	A

IX. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

X. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Wet Chemistry - Data Qualification Summary - SDG DE130

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
DE130	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-086-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 SL-032-SA5A-SB-3.0-4.0 SL-172-SA5A-SB-4.0-5.0 SL-174-SA5A-SB-2.0-3.0 SL-254-SA5A-SB-2.5-3.5	Fluoride	J (all detects) UJ (all non-detects)	A	Matrix spike analysis (%R) (Q)
DE130	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-086-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 EB05-SA8N-SS-041811 SL-032-SA5A-SB-3.0-4.0 SL-172-SA5A-SB-4.0-5.0 SL-174-SA5A-SB-2.0-3.0 SL-254-SA5A-SB-2.5-3.5 EB13-SA5A-SB-041811	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification (Z)

Santa Susana Field Laboratory
Wet Chemistry – Laboratory Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Wet Chemistry - Field Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

LDC #: 26078B6 **VALIDATION COMPLETENESS WORKSHEET** Date: 8-29-11
SDG #: DE130 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: ar
2nd Reviewer: [illegible]

METHOD: (Analyte) Cyanide (EPA SW846 Method 9012B), Nitrate-N, Fluoride (EPA Method 300.0), Hexavalent Chromium (EPA SW846 Method 7199), ~~pH (EPA Method 150.1/EPA SW846 Method 9045C)~~, Perchlorate (EPA Method 314.0)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/18/11
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	A	
IV	Matrix Spike/Matrix Spike Duplicates	SW	MS
V	Duplicates	A	DUP
VI.	Laboratory control samples	A	LCS/D
VII.	Sample result verification	A	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N	
X.	Field blanks	ND	EB: 8, 13

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil / water

1	SL-056-SA8N-SS-0.0-0.05	11	SL-174-SA5A-SB-2.0-3.0	21		31	
2	SL-057-SA8N-SS-0.0-0.05	12	SL-254-SA5A-SB-2.5-3.5	22		32	
3	SL-071-SA8N-SS-0.0-0.05	13	EB13-SA5A-SB-041811 W	23		33	
4	SL-080-SA8N-SS-0.0-0.05	14	(#1) MS	24		34	
5	SL-085-SA8N-SS-0.0-0.05	15	↓ DUP	25		35	
6	SL-086-SA8N-SS-0.0-0.05	16	(#7) MS	26		36	
7	SL-132-SA8N-SS-0.0-0.05	17	↓ DUP	27		37	
8	EB05-SA8N-SS-041811 W	18	(#12) MS	28		38	
9	SL-032-SA5A-SB-3.0-4.0	19		29		39	
10	SL-172-SA5A-SB-4.0-5.0	20		30		40	

Notes:

Method: Inorganics (EPA Method See Cover)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial calibration correlation coefficients > 0.995?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?	✓			
Were titrant checks performed as required? (Level IV only)			✓	
Were balance checks performed as required? (Level IV only)			✓	
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
IV. Matrix spike/Matrix spike duplicates and Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.		✓		
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of ≤ CRDL(≤ 2X CRDL for soil) was used for samples that were ≤ 5X the CRDL, including when only one of the duplicate sample values were ≤ 5X the CRDL.	✓			
V. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits?	✓			
VI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

Validation Area	Yes	No	NA	Findings/Comments
VII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Were detection limits < RL?	✓			
VIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
IX. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
X. Field blanks				
Field blanks were identified in this SDG.	✓	✓		
Target analytes were detected in the field blanks.				

LDC #: 26078B6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Reviewer: CR
2nd reviewer: L

All circled methods are applicable to each sample.

Sample ID	Matrix	Parameter
1-5,7,8		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
6,9-13		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
QC: 14,15		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
16,17		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
18		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4

Comments:

LDC #: 26078B6

VALIDATION FINDINGS WORKSHEET
Matrix Spike Analysis

Reviewer: CP
2nd Reviewer: [illegible]

METHOD: Inorganics, Method Secon

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a matrix spike analyzed for each matrix in this SDG?

Y N N/A Were matrix spike percent recoveries (%R) within the control limits of 75-125 (85-115% for Method 300.0)? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Date	Matrix Spike ID	Matrix	Analyte	%R	Associated Samples	Qualifications
		14	S	F	75(80-120)	1-7,9-11	J/UJ/A (Q)
		18	S	F	36(80-120)	12	J (Q)

Comments:

LDC #: 26078B6

Validation Findings Worksheet
Initial and Continuing Calibration Calculation Verification

Reviewer: JR
2nd Reviewer:

Method: Inorganics, Method See Cover

The correlation coefficient (r) for the calibration of ClO4 was recalculated. Calibration date: 3/28/11

An initial or continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found X 100 / True

Where, Found = concentration of each analyte measured in the analysis of the ICV or CCV solution

True = concentration of each analyte in the ICV or CCV source

Type of analysis	Analyte	Standard	Conc. (ug/L)	Response	Recalculated r or r^2	Reported r or r^2	Acceptable (Y/N)
Initial calibration	ClO4	s1	2	0.004	1.000	1.000	Y
		s2	4	0.01			
		s3	10	0.025			
		s4	25	0.072			
		s5	100	0.292			
Calibration verification	CN	CCV	0.15	0.16320	109	109	
Calibration verification	NO3		1.5	1.4736	98	98	
Calibration verification	F			1.4850	99	99	

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26070J0

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: QR
2nd Reviewer:

METHOD: Inorganics, Method See cover

Percent recoveries (%R) for a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

Sample ID	Type of Analysis	Element	Found / S (units)	True / D (units)	Recalculated %R / RPD	Reported %R / RPD	Acceptable (Y/N)
LCS	Laboratory control sample	Cd	22.4	25	90	~~0~~	Y
16	Matrix spike sample	CN	(SSR-SR) 5.3	4.95	107	108	↓
15	Duplicate sample	NO3	3.1	2.8	10	9	↓

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B6

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: CR
2nd reviewer: V

METHOD: Inorganics, Method See cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments?
Y N N/A Are all detection limits below the CRQL?

Compound (analyte) results for NO3 / CrO4 reported with a positive detect were recalculated and verified using the following equation:

Concentration =

NO_3: $C = 0.7008x - 0.0140$

Recalculation:

1: $NO_3 = \frac{\left(\frac{0.202 + 0.0140}{0.7008}\right)(50\,mL)}{5g\,(0.857)} = 3.6\,mg/kg$

CrO_4: $C = Area(82.818) + 0.687$

3: $CrO_4 = \frac{(0.1112(82.818) + 0.687)}{24.60g\,(0.854)} = 0.47\,mg/kg$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
.857	1	F	2.1	2.1	Y
		NO_3	3.6	3.6		
.854	3	F	1.7	1.7	
		NO_3	3.4	3.4	
		CrO_4	0.48	0.47	
		CN	0.23	0.23	

Note:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	April 18, 2011
LDC Report Date:	August 31, 2011
Matrix:	Water
Parameters:	Total Petroleum Hydrocarbons as Gasoline
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE130

Sample Identification

TB-041811

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Total Petroleum Hydrocarbons (TPH) as Gasoline.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as gasoline contaminants were found in the method blanks.

Sample TB-041811 was identified as a trip blank. No total petroleum hydrocarbons as gasoline contaminants were found.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE130	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Data Qualification Summary - SDG DE130

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE130	TB-041811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and CRQLs (Z)

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Field Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

LDC #: 26078B7 **VALIDATION COMPLETENESS WORKSHEET** Date: 8/29/11

SDG #: DE130 Level IV Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: EZ

2nd Reviewer:

METHOD: GC TPH as Gasoline (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/18/11
II	Initial calibration	A	%RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	N	QC sample
VII.	Laboratory control samples	A	LCS/D
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	ND	FB = 1

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: water

1	TB-041811	11	BLK84	21		31	
2		12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26078B7
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FT
2nd Reviewer: A

✓

Method: ____ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26078B7
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: CA

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

LDC #: 26078J
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FJ
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported	Recalculated	Reported	Recalculated	Reported	Recalculated
				CF (1100 std)	CF (1100 std)	Average CF (initial)	Average CF (initial)	%RSD	%RSD
1	ICAL	5/14/10	GRO	8549	8549	8050	8050	5.2	5.2
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B7
SDG #: fw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: A

METHOD: GC ✓ HPLC _____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	ccv	4/26/11 22:12	GRO	550.00	543.30	543.30	1.2	1.2
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B1
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer:

METHOD: ✓GC ___ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Trifluorotoluene - F	ND	30	21.701	72	72	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 26078B7
SDG #: all cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: P
2nd Reviewer: A

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: lcs ID

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)	1100	1100	1200	1200	109	109	109	109	0	0
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B7
SDG #: pu ___ ___

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: ___
2nd Reviewer: ___

METHOD: ✓ GC ___ HPLC

Y N (N/A) Were all reported results recalculated and verified for all level IV samples?
Y N (N/A) Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID.___ Compound Name ___

Concentration = ___

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: ___

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 18, 2011

LDC Report Date: August 31, 2011

Matrix: Soil/Water

Parameters: Total Petroleum Hydrocarbons as Extractables

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE130

Sample Identification

SL-056-SA8N-SS-0.0-0.05
SL-057-SA8N-SS-0.0-0.05
SL-071-SA8N-SS-0.0-0.05
SL-080-SA8N-SS-0.0-0.05
SL-085-SA8N-SS-0.0-0.05
SL-132-SA8N-SS-0.0-0.05
EB05-SA8N-SS-041811

Introduction

This data review covers 6 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Total Petroleum Hydrocarbons (TPH) as Extractables.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as extractable contaminants were found in the method blanks.

Sample EB05-SA8N-SS-041811 was identified as an equipment blank. No total petroleum hydrocarbons as extractable contaminants were found.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE130	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG DE130

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE130	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 EB05-SA8N-SS-041811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

LDC #: 26078B8 **VALIDATION COMPLETENESS WORKSHEET** Date: 8/30/11
SDG #: DE130 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC TPH as Extractables (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/18/11
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	N	client specified
VII.	Laboratory control samples	A	LCS ID
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	NP	EB = 7

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil + water

1 1	SL-056-SA8N-SS-0.0-0.05	11 1	PBLK16111	21		31	
2 1	SL-057-SA8N-SS-0.0-0.05	12 2	PBLK43110	22		32	
3 1	SL-071-SA8N-SS-0.0-0.05	13		23		33	
4 1	SL-080-SA8N-SS-0.0-0.05	14		24		34	
5 1	SL-085-SA8N-SS-0.0-0.05	15		25		35	
6 1	SL-132-SA8N-SS-0.0-0.05	16		26		36	
7 2	EB05-SA8N-SS-041811	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

LDC #: 26078BK
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FV
2nd Reviewer: C

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26078B8
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

LDC #: 26078B8
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FJ
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (7x8 std)	Recalculated CF (7x8 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	4/19/11	Cx-C40	2091344	2091344	21026.71	21026.71	1-8	1-8
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B8 (8)
SDG #: fw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 7
Reviewer: EJ
2nd Reviewer: C

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	ccv	4/26/11 5:30	c8-c40	575.96	626.90	626.90	8.8	8.8
2	ccv	4/27/11 10:04	c8-c40	287.98	302.34	302.34	5.0	5.0
3	ccv	4/29/11 6:50	c8-c40	143.99	150.33	150.33	4.4	4.4
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B5J
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer:

METHOD: ✓ GC ___ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
chlorobenzene	NS	0.99	0.719567	73	73	0
o-Terphenyl	L	0.99	0.9334	94	94	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 26078B8
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: FO
2nd Reviewer: A

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS 160111

Compound	Spike Added (mg/kg)		Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
~~Diesel (8015)~~ EPH (C8-C)	0.84	NA	0.66	NA	79	79	NA			
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B8
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #1 Compound Name C30 - C40

Concentration = $\frac{345\,82\,386\ (1000)}{21026.71\ (60.5)(0.857)(1000)}$

= 32 mg/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 18, 2011

LDC Report Date: August 31, 2011

Matrix: Soil/Water

Parameters: Explosives

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE130

Sample Identification

SL-056-SA8N-SS-0.0-0.05
SL-057-SA8N-SS-0.0-0.05
SL-071-SA8N-SS-0.0-0.05
SL-080-SA8N-SS-0.0-0.05
SL-085-SA8N-SS-0.0-0.05
SL-132-SA8N-SS-0.0-0.05
EB05-SA8N-SS-041811

Introduction

This data review covers 6 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8330A for Explosives.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed for the primary (quantitation) column and confirmation column as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at the required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits with the following exceptions:

Date	Column	Compound	%D	Associated Samples	Flag	A or P
4/30/11	Capcell	2,6-Dinitrotoluene	24.2	SL-132-SA8N-SS-0.0-0.05	J (all detects) UJ (all non-detects)	A

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No explosive contaminants were found in the method blanks.

Sample EB05-SA8N-SS-041811 was identified as an equipment blank. No explosive contaminants were found.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
LCS/D02109 (All water samples in SDG DE130)	Tetryl	50 (72-141)	56 (72-141)	-	J (all detects) UJ (all non-detects)	P
LCS04116 (All soil samples in SDG DE130)	Nitrobenzene PETN	124 (80-120) 124 (80-120)	- -	- -	J (all detects) J (all detects)	P

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE130	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Explosives - Data Qualification Summary - SDG DE130

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE130	SL-132-SA8N-SS-0.0-0.05	2,6-Dinitrotoluene	J (all detects) UJ (all non-detects)	A	Calibration verification (%D) (C)
DE130	EB05-SA8N-SS-041811	Tetryl	J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R) (L)
DE130	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05	Nitrobenzene PETN	J (all detects) J (all detects)	P	Laboratory control samples (%R) (L)
DE130	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 EB05-SA8N-SS-041811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Explosives - Laboratory Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Explosives - Field Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

LDC #: 26078B40 **VALIDATION COMPLETENESS WORKSHEET** Date: 8/30/11
SDG #: DE130 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: EJ
2nd Reviewer: A

METHOD: HPLC Explosives (EPA SW 846 Method 8330A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/18/11
II	Initial calibration	A	% RSD ≤ 20, r^2
III.	Calibration verification/ICV	SW	ICV/CCV ±20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	N	client specified
VII.	Laboratory control samples	SW	LCS/LCSD
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	ND	EB= 7

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:
soil & water

1 1	SL-056-SA8N-SS-0.0-0.05 S	11 1	PBLK04116	21		31	
2 1	SL-057-SA8N-SS-0.0-0.05	12 2	PBLK02109	22		32	
3 1	SL-071-SA8N-SS-0.0-0.05	13		23		33	
4 1	SL-080-SA8N-SS-0.0-0.05	14		24		34	
5 1	SL-085-SA8N-SS-0.0-0.05	15		25		35	
6 1	SL-132-SA8N-SS-0.0-0.05	16		26		36	
7 2	EB05-SA8N-SS-041811 W	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26078B40
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FT
2nd Reviewer:

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26078B40
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

VALIDATION FINDINGS WORKSHEET

METHOD: ____GC ____HPLC

8310	8330	8151	8141	8141 (Con't)	8021B
A. Acenaphthene	A. HMX	A. 2,4-D	A. Dichlorvos	V. Fensulfothion	V. Benzene
B. Acenaphthylene	B. RDX	B. 2,4-DB	B. Mevinphos	W. Bolstar	CC. Toluene
C. Anthracene	C. 1,3,5-Trinitrobenzene	C. 2,4,5-T	C. Demeton-O	X. EPN	EE. Ethyl Benzene
D. Benzo(a)anthracene	D. 1,3-Dinitrobenzene	D. 2,4,5-TP	D. Demeton-S	Y. Azinphos-methyl	SSS. O-Xylene
E. Benzo(a)pyrene	E. Tetryl	E. Dinoseb	E. Ethoprop	Z. Coumaphos	RRR. MP-Xylene
F. Benzo(b)fluoranthene	F. Nitrobenzene	F. Dichlorprop	F. Naled	AA. Parathion	GG. Total Xylene
G. Benzo(g,h,i)perylene	G. 2,4,6-Trinitrotoluene	G. Dicamba	G. Sulfotep	BB. Trichloronate	
H. Benzo(k)fluoranthene	H. 4-Amino-2,6-dinitrotoluene	H. Dalapon	H. Phorate	CC. Trichlorinate	
I. Chrysene	I. 2-Amino-4,6-dinitrotoluene	I. MCPP	I. Dimethoate	DD. Trifluralin	
J. Dibenz(a,h)anthracene	J. 2,4-Dinitrotoluene	J. MCPA	J. Diazinon	EE. Def	
K. Fluoranthene	K. 2,6-Dinitrotoluene	K. Pentachlorophenol	K. Disulfoton	FF. Prowl	
L. Fluorene	L. 2-Nitrotoluene	L. 2,4,5-TP (silvex)	L. Parathion-methyl	GG. Ethion	
M. Indeno(1,2,3-cd)pyrene	M. 3-Nitrotoluene	M. Silvex	M. Ronnel	HH. Tetrachlorvinphos	
N. Naphthalene	N. 4-Nitrotoluene		N. Malathion	II. Sulprofos	
O. Phenanthrene	O.		O. Chlorpyrifos		
P. Pyrene	P.		P. Fenthion		
Q.	Q		Q. Parathion-ethyl		
R.			R. Trichloronate		
S.			S. Merphos		
			T. Stirofos		
			U. Tokuthion		

Notes: _____

LDC #: 26078B40

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

What type of continuing calibration calculation was performed? ___%D or ___RPD

[✓ Y] N N/A Were continuing calibration standards analyzed at the required frequencies?

Y [✓ N] N/A Did the continuing calibration standards meet the %D / RPD validation criteria of <20.0%?

Level IV Only

[✓ Y] N N/A Were the retention times for all calibrated compounds within their respective acceptance windows?

#	Date	Standard ID	Detector/ Column	Compound	%D (Limit ≤ 20.0)	RT (limit)	Associated Samples	Qualifications
	4/30/11	CCV	CAPCELL	K	24.2	( )	6	J/UJ/R (c)
	13:20					( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
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						( )		
						( )		
						( )		

LDC #: 26078B40

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a laboratory control samples (LCS) and laboratory control sample duplicate (LCSD) analyzed for each matrix in this SDG?

Y N N/A Were the LCS percent recoveries (%R) and relative percent differences (RPD) within the QC limits?

Level IV/D Only

Y N N/A Was an LCS analyzed every 20 samples for each matrix or whenever a sample extraction was performed?

#	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	lcs1D02109	E	50 (72-141)	56 (72-141)	( )	All water	J/NJ/P (L)
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
	lcs04116	F	124 (80-120)	( )	( )	All soils ↓	J/pdet (L) ↓
		PETN	124 (↓)	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 26078B40
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: EJ
2nd Reviewer: A

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (499.5 std)	Recalculated CF (499.5 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL chrompack	5/17/11	1,3-DNB	2.76×10^2	2.76×10^2	2.77×10^2	2.77×10^2	1.1	1.1
			Nitrobenzene	2.09×10^2	2.09×10^2	2.11×10^2	2.11×10^2	3.3	3.3
2	ICAL CAPCELL	5/17/11	↓	2.45×10^2	2.45×10^2	2.57×10^2	2.57×10^2	4.3	4.3
				1.69×10^2	1.69×10^2	1.80×10^2	1.80×10^2	6.33	6.33
3	ICAL chrompack	4/29/11	↓	2.72×10^2	2.72×10^2	2.76×10^2	2.76×10^2	1.6	1.6
				1.99×10^2	1.99×10^2	1.98×10^2	1.98×10^2	4.4	4.4
4	ICAL capcell	4/29/11	1,3-DNB	2.06×10^2	2.06×10^2	2.25×10^2	2.25×10^2	15.2	15.2
			1,4-DNB	3.10×10^2	3.10×10^2	3.40×10^2	3.40×10^2	18.5	18.5

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B40
SDG #: fw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 7
Reviewer: EJ
2nd Reviewer:

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	ccv	4/30/11	1,3-DNB	500.05	535.99	535.99	7.2	7.2
	chrompack	1:19	Nitrobenzene	500.00	502.60	502.60	0.5	0.5
2	ccv	4/30/11	↓	507.00	498.25	498.25	1.7	1.7
	chrompack	13:20	↓	499.50	516.79	516.79	3.5	3.5
3	ccv	4/30/11	1,3-DNB	500.05	519.98	519.98	4.0	4.0
	capcell	1:19	1,4-DNB	500.00	517.86	517.86	3.6	3.6
4	ccv	4/30/11	↓	~~500.00~~ 507.00	488.63	488.63	3.6	3.6
	capcell	13:20	↓	493.00	457.40	457.40	7.2	7.2

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B40
SDG #: see cover
METHOD: / GC __ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer:

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
2. Nitro - m - xylene	~~Carbopack~~ Chromapack	1852	1885.362	102	102	0

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference

LDC #: 26078B40
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Page: 1 of 1
Reviewer: F
2nd Reviewer:

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA

RPD = | SSCLCS - SSCLCSD | * 2/(SSCLCS + SSCLCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS04116

Compound	Spike Added (ug/Kg)		Spiked Sample Concentration (ug/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
HMX	2000.25	NA	2103.64	NA	105	105				
RDX	2000	↓	2148.9	↓	107	107	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B4C

SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration =_____

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 18, 2011

LDC Report Date: August 31, 2011

Matrix: Soil/Water

Parameters: Terphenyls

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE130

Sample Identification

SL-056-SA8N-SS-0.0-0.05
SL-057-SA8N-SS-0.0-0.05
SL-071-SA8N-SS-0.0-0.05
SL-080-SA8N-SS-0.0-0.05
SL-085-SA8N-SS-0.0-0.05
SL-132-SA8N-SS-0.0-0.05
EB05-SA8N-SS-041811

Introduction

This data review covers 6 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Terphenyls.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No terphenyl contaminants were found in the method blanks.

Sample EB05-SA8N-SS-041811 was identified as an equipment blank. No terphenyl contaminants were found.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE130	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Terphenyls - Data Qualification Summary - SDG DE130

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE130	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 EB05-SA8N-SS-041811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Terphenyls - Laboratory Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Terphenyls - Field Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

LDC #: 26078B41 **VALIDATION COMPLETENESS WORKSHEET** Date: 8/30/11
SDG #: DE130 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: F
2nd Reviewer:

METHOD: GC Terphenyls (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/18/11
II	Initial calibration	A	%D RSD ≤ 20
III.	Calibration verification/~~ICV~~	A	ccv ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	N	
VII.	Laboratory control samples	A	lcs ID
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	ND	EB-7

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil + water

1 1	SL-056-SA8N-SS-0.0-0.05 S	11 1	PBLK30110	21		31	
2 1	SL-057-SA8N-SS-0.0-0.05	12 2	PBLK42110	22		32	
3 1	SL-071-SA8N-SS-0.0-0.05	13		23		33	
4 1	SL-080-SA8N-SS-0.0-0.05	14		24		34	
5 1	SL-085-SA8N-SS-0.0-0.05	15		25		35	
6 1	SL-132-SA8N-SS-0.0-0.05	16		26		36	
7 2	EB05-SA8N-SS-041811 W	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26078B4|
SDG #: all waters

VALIDATION FINDINGS CHECKLIST

Reviewer: FD
2nd Reviewer: C

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26078B41
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.	✓	✓		
Target compounds were detected in the field blanks.		✓		

LDC #: 26078B41
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC _____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported 15.520 CF (std)	Recalculated 15.520 CF (std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	4/18/11	m-Terphenyl	3.42×10^4	3.42×10^4	3.30×10^4	3.30×10^4	2.4	2.4
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 76078B4/
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 7
Reviewer: EJ
2nd Reviewer:

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	ccv	4/23/11 11:25	m-Terphenyl	31.04	31.13	31.13	0.3	0.3
2	ccv	4/23/11 19:37	↓	31.04	31.32	31.32	0.9	0.9
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B4/
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: A

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
n- Triacontane-d62	NS	0.3344	0.220739	66	66	0

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 26078B4/
SDG #: mu cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: F2
2nd Reviewer: A

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS

Compound	Spike Added (mg/kg)		Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
m-Terphenyl	1.43	NA	1.32	NA	92	92	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B4/
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration = _____

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 18, 2011

LDC Report Date: August 31, 2011

Matrix: Soil/Water

Parameters: Alcohols

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE130

Sample Identification

SL-056-SA8N-SS-0.0-0.05
SL-057-SA8N-SS-0.0-0.05
SL-071-SA8N-SS-0.0-0.05
SL-080-SA8N-SS-0.0-0.05
SL-085-SA8N-SS-0.0-0.05
SL-132-SA8N-SS-0.0-0.05
EB05-SA8N-SS-041811
SL-080-SA8N-SS-0.0-0.05MS
SL-080-SA8N-SS-0.0-0.05MSD

Introduction

This data review covers 8 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Alcohols.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No alcohol contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound	Concentration	Associated Samples
PBLK25109	4/19/11	Methanol	100 ug/Kg	All soil samples in SDG DE130

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks.

Sample EB05-SA8N-SS-041811 was identified as an equipment blank. No alcohol contaminants were found.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE130	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Alcohols - Data Qualification Summary - SDG DE130

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE130	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 EB05-SA8N-SS-041811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Alcohols - Laboratory Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Alcohols - Field Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

LDC #: 26078B43 **VALIDATION COMPLETENESS WORKSHEET** Date: 8/30/11

SDG #: DE130 Level IV Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC Alcohols (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/18/11
II	Initial calibration	A	%RSD ≤ 20, r²
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	SW	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	ND	FB = 7

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil + water

1	SL-056-SA8N-SS-0.0-0.05 S	11	PBLK25109	21		31		
2	SL-057-SA8N-SS-0.0-0.05	12	PBLK38116	22		32		
3	SL-071-SA8N-SS-0.0-0.05	13		23		33		
4	SL-080-SA8N-SS-0.0-0.05	14		24		34		
5	SL-085-SA8N-SS-0.0-0.05	15		25		35		
6	SL-132-SA8N-SS-0.0-0.05	16		26		36		
7	EB05-SA8N-SS-041811 W	17		27		37		
8	#4 MS	18		28		38		
9	#4 MSD	19		29		39		
10		20		30		40		

Notes: _____

LDC #: 26078B43
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FI
2nd Reviewer: C

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓	✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26078B43
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

LDC #: 26078
SDG #: DE130

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: SM
2nd Reviewer: A

METHOD: ___ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were all samples associated with a given method blank?
Y N N/A Was a method blank performed for each matrix and whenever a sample extraction procedure was performed?
Y N N/A Was a method blank performed with each extraction batch?
Y N N/A Were any contaminants found in the method blanks? If yes, please see findings below.

Level IV/D Only

Y N N/A (Gasoline and aromatics only)Was a method blank analyzed with each 24 hour batch?
Y N N/A Was a method blank analyzed for each analytical / extraction batch of ≤20 samples?

Blank extraction date: 4/19/11 **Blank analysis date:** 4/20/11 **Associated samples:** PB and 5 soil
Conc. units: ug/kg

Compound	Blank ID	Sample Identification						
	PBLK25109							
Methanol	100							

Blank extraction date:_____ **Blank analysis date:**_____ **Associated samples:**_____
Conc. units:_____

Compound	Blank ID	Sample Identification						

ALL CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the method blank concentration were qualified as not detected, "U".

LDC #: 26078B43
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer:
2nd Reviewer:

METHOD: GC ✓ HPLC

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported 5000 CF (std)	Recalculated 5000 CF (std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	4/20/11	ethanol	2.92	2.92	2.95	2.95	0.8	0.8
2	ICAL	4/18/11	ethanol	8.51	8.51	8.61	8.61	2.5	2.5
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B43
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	4/20/11 19:42	CCV	ethanol	10,000	9994.83	9994.83	0.1	0.1
2	4/20/11 23:41	CCV	↓	↓	9905.38	9905.38	0.9	0.9
3	4/27/11 21:02	CCV	↓	5000.00	5083.81	5083.81	1.7	1.7
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B47
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer:

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Acetone	NS	2500	1799.95)	72	72	0

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference

LDC #: 26018D47
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: EZ
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added
RPD =(((SSCMS - SSCMSD) * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 8+9

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	--	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
Methane	2000	2500	ND	1328.97	1333.87	53	53	53	53	0	0

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B43
SDG #: all cores

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Page: 1 of 1
Reviewer: EO
2nd Reviewer: CA

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = I LCS - LCSD I * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
SC = Concentration
LCS = Laboratory control sample percent recovery
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Methanol	2500	NA	2336.27	NA	93	93				

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B43
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration =_____.

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 18, 2011

LDC Report Date: August 31, 2011

Matrix: Soil/Water

Parameters: Glycols

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE130

Sample Identification

SL-056-SA8N-SS-0.0-0.05
SL-057-SA8N-SS-0.0-0.05
SL-071-SA8N-SS-0.0-0.05
SL-080-SA8N-SS-0.0-0.05
SL-085-SA8N-SS-0.0-0.05
SL-132-SA8N-SS-0.0-0.05
EB05-SA8N-SS-041811

Introduction

This data review covers 6 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Glycols.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0%.

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No glycol contaminants were found in the method blanks.

Sample EB05-SA8N-SS-041811 was identified as an equipment blank. No glycol contaminants were found.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE130	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Glycols - Data Qualification Summary - SDG DE130

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE130	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 EB05-SA8N-SS-041811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Glycols - Laboratory Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Glycols - Field Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

LDC #: 26078B45 **VALIDATION COMPLETENESS WORKSHEET** Date: 8/29/11
SDG #: DE130 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Glycols (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/18/11
II	Initial calibration	A	%RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	N	client specified
VII.	Laboratory control samples	A	LCS
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	NP	EB = 7

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil + water

1 1	SL-056-SA8N-SS-0.0-0.05 S	11	PBLK03110	21		31	
2 1	SL-057-SA8N-SS-0.0-0.05	12	PBLK02110	22		32	
3 1	SL-071-SA8N-SS-0.0-0.05	13		23		33	
4 1	SL-080-SA8N-SS-0.0-0.05	14		24		34	
5 1	SL-085-SA8N-SS-0.0-0.05	15		25		35	
6 1	SL-132-SA8N-SS-0.0-0.05	16		26		36	
7 2	EB05-SA8N-SS-041811 W	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26078B45
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FD
2nd Reviewer: C

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26078B45
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?			✓	
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

LDC #: 26078B45
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: F?
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

level 4

#	Standard ID	Calibration Date	Compound	Reported 200.5164 CF (std)	Recalculated 200.5164 CF (std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL GLF110A	4/20/11	Propylene Glycol	3.66×10^2	3.66×10^2	3.63×10^2	3.63×10^2	12.1	12.1
2	ICAL GLG111A	4/21/11	↓	3.25×10^2	3.25×10^2	3.18×10^2	3.18×10^2	16.5	16.5
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B45
SDG #: fw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer:

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	F110.0022	4/20/11 18:06	Propylene Glycol	100.26	89.26	89.26	11.0	11.0
	F110.0033	4/20/11 21:20	↓	100.26	86.50	86.50	13.7	13.7
2								
	F111B.0021	4/21/11 19:02	↓	100.26	94.53	94.53	5.7	5.7
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078Y5

SDG #: see cover

METHOD: ✓ GC __ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer: [signature]

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
		192.15		Reported	Recalculated	
Tetramethylene glycol	NS	~~197.25~~	122.4037	64	64	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 26078B45
SDG #: all cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: FO
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS03110

Compound	Spike Added (mg/kg)		Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Ethylene Glycol	198.16	NA	216.17	NA	109	109	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26678B45
SDG #: pu pone

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration =_____

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 18, 2011

LDC Report Date: August 31, 2011

Matrix: Soil/Water

Parameters: Formaldehyde

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE130

Sample Identification

SL-056-SA8N-SS-0.0-0.05
SL-057-SA8N-SS-0.0-0.05
SL-071-SA8N-SS-0.0-0.05
SL-080-SA8N-SS-0.0-0.05
SL-085-SA8N-SS-0.0-0.05
SL-132-SA8N-SS-0.0-0.05
EB05-SA8N-SS-041811

Introduction

This data review covers 6 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8315A for Formaldehyde.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No formaldehyde was found in the method blanks.

Sample EB05-SA8N-SS-041811 was identified as an equipment blank. No formaldehyde was found.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE130	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Formaldehyde - Data Qualification Summary - SDG DE130

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE130	SL-056-SA8N-SS-0.0-0.05 SL-057-SA8N-SS-0.0-0.05 SL-071-SA8N-SS-0.0-0.05 SL-080-SA8N-SS-0.0-0.05 SL-085-SA8N-SS-0.0-0.05 SL-132-SA8N-SS-0.0-0.05 EB05-SA8N-SS-041811	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Formaldehyde - Laboratory Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Formaldehyde - Field Blank Data Qualification Summary - SDG DE130

No Sample Data Qualified in this SDG

LDC #: 26078B71 **VALIDATION COMPLETENESS WORKSHEET** Date: 8/30/11
SDG #: DE130 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: F7
2nd Reviewer:

METHOD: HPLC Formaldehyde (EPA SW 846 Method 8315A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/18/11
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/ICV	A	CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	N	client specified
VII.	Laboratory control samples	A	LCS/D
VIII.	Target compound identification	A	
IX.	Compound quantitation RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	ND	EB = 7

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil + water

1 1	SL-056-SA8N-SS-0.0-0.05	11 1	PBLK05110	21		31	
2 1	SL-057-SA8N-SS-0.0-0.05	12 2	PBLK03111	22		32	
3 1	SL-071-SA8N-SS-0.0-0.05	13		23		33	
4 1	SL-080-SA8N-SS-0.0-0.05	14		24		34	
5 1	SL-085-SA8N-SS-0.0-0.05	15		25		35	
6 1	SL-132-SA8N-SS-0.0-0.05	16		26		36	
7 2	EB05-SA8N-SS-041811 W	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 26078B7J
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FT
2nd Reviewer: C

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26078B71
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

LDC #: 26078 B7 1
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FJ
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

level 3

#	Standard ID	Calibration Date	Compound	Reported 2002 CF (std)	Recalculated 2002 CF (std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	4/22/11	Formaldehyde	6.47×10^{1}	6.47×10^{1}	6.39×10^{1}	6.39×10^{1}	1.2	1.2
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B7/
SDG #: w Comm

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 7
Reviewer: EJ
2nd Reviewer: A

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	IF4112.20	4/22/11	formaldehyde	2002.00	1996.36	1996.36	0.3	0.3
	IF4112.31	4/22/11	↓	↓	2005.08	2005.08	0.2	0.2
2								
	IF4112.42	4/22/11	↓	2002.00	1989.46	1989.46	0.6	0.6
3	IF4112.53	4/23/11	↓	2002.00	1984.07	1984.07	0.9	0.9
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B 1/
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: CA

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Butyraldehyde	N7	~~1959~~ 196.9	4379.047/2	112	112	0

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 26078B71
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: F
2nd Reviewer: C

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: 1851D

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Formaldehyde	5010	NA	4705.34	NA	94	94	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26078B7/
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration =_____

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

SAMPCALew.wpd

SAMPLE DELIVERY GROUP

DE131

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Apr-2011	TB-041911	6262840	TB	5030B	8260B	III
19-Apr-2011	TB-041911	6262840	TB	5030B	8260B SIM	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5	6262819	N	3050B	6010B	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5	6262819	N	3050B	6020	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5	6262819	N	3060A	7199	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5	6262819	N	3546	1625C	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5	6262819	N	3550B	8015B	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5	6262819	N	3550B	8015M	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5	6262819	N	3550B	8082	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5	6262819	N	3550B	8270C	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5	6262819	N	3550B	8270C SIM	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5	6262819	N	8330	8330A	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5	6262819	N	METHOD	300.0	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5	6262819	N	METHOD	314.0	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5	6262819	N	METHOD	7471A	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5	6262819	N	METHOD	8015B	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5	6262819	N	METHOD	8015M	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5	6262819	N	METHOD	8315A	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5	6262819	N	METHOD	9012B	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5DUP	P262819D271104A	DUP	METHOD	300.0	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5DUP	P262819D271430A	DUP	METHOD	314.0	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5MSD	P262819M322233A	MSD	METHOD	8015M	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5MS	P262819R271118A	MS	METHOD	300.0	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5MS	P262819R271452A	MS	METHOD	314.0	III
19-Apr-2011	SL-075-SA8N-SS-0.0-0.5MS	P262819R322158A	MS	METHOD	8015M	III
19-Apr-2011	SL-135-SA8N-SS-0.0-0.5	6262829	N	3050B	6010B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Apr-2011	SL-135-SA8N-SS-0.0-0.5	6262829	N	3050B	6020	III
19-Apr-2011	SL-135-SA8N-SS-0.0-0.5	6262829	N	3060A	7199	III
19-Apr-2011	SL-135-SA8N-SS-0.0-0.5	6262829	N	3546	1625C	III
19-Apr-2011	SL-135-SA8N-SS-0.0-0.5	6262829	N	3550B	8015B	III
19-Apr-2011	SL-135-SA8N-SS-0.0-0.5	6262829	N	3550B	8015M	III
19-Apr-2011	SL-135-SA8N-SS-0.0-0.5	6262829	N	3550B	8082	III
19-Apr-2011	SL-135-SA8N-SS-0.0-0.5	6262829	N	3550B	8270C	III
19-Apr-2011	SL-135-SA8N-SS-0.0-0.5	6262829	N	3550B	8270C SIM	III
19-Apr-2011	SL-135-SA8N-SS-0.0-0.5	6262829	N	8330	8330A	III
19-Apr-2011	SL-135-SA8N-SS-0.0-0.5	6262829	N	Gen Prep	314.0	III
19-Apr-2011	SL-135-SA8N-SS-0.0-0.5	6262829	N	METHOD	300.0	III
19-Apr-2011	SL-135-SA8N-SS-0.0-0.5	6262829	N	METHOD	7471A	III
19-Apr-2011	SL-135-SA8N-SS-0.0-0.5	6262829	N	METHOD	8015B	III
19-Apr-2011	SL-135-SA8N-SS-0.0-0.5	6262829	N	METHOD	8015M	III
19-Apr-2011	SL-135-SA8N-SS-0.0-0.5	6262829	N	METHOD	8315A	III
19-Apr-2011	SL-135-SA8N-SS-0.0-0.5	6262829	N	METHOD	9012B	III
19-Apr-2011	SL-171-SA5A-SB-2.0-3.0	6262837	N	3050B	6010B	III
19-Apr-2011	SL-171-SA5A-SB-2.0-3.0	6262837	N	3050B	6020	III
19-Apr-2011	SL-171-SA5A-SB-2.0-3.0	6262837	N	3060A	7199	III
19-Apr-2011	SL-171-SA5A-SB-2.0-3.0	6262837	N	3550B	8082	III
19-Apr-2011	SL-171-SA5A-SB-2.0-3.0	6262837	N	3550B	8270C	III
19-Apr-2011	SL-171-SA5A-SB-2.0-3.0	6262837	N	3550B	8270C SIM	III
19-Apr-2011	SL-171-SA5A-SB-2.0-3.0	6262837	N	5035	8260B	III
19-Apr-2011	SL-171-SA5A-SB-2.0-3.0	6262837	N	5035	8260B SIM	III
19-Apr-2011	SL-171-SA5A-SB-2.0-3.0	6262837	N	METHOD	300.0	III
19-Apr-2011	SL-171-SA5A-SB-2.0-3.0	6262837	N	METHOD	314.0	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Apr-2011	SL-171-SA5A-SB-2.0-3.0	6262837	N	METHOD	7471A	III
19-Apr-2011	SL-140-SA8N-SS-0.0-0.5	6262835	N	3050B	6010B	III
19-Apr-2011	SL-140-SA8N-SS-0.0-0.5	6262835	N	3050B	6020	III
19-Apr-2011	SL-140-SA8N-SS-0.0-0.5	6262835	N	3060A	7199	III
19-Apr-2011	SL-140-SA8N-SS-0.0-0.5	6262835	N	3546	1625C	III
19-Apr-2011	SL-140-SA8N-SS-0.0-0.5	6262835	N	3550B	8015B	III
19-Apr-2011	SL-140-SA8N-SS-0.0-0.5	6262835	N	3550B	8015M	III
19-Apr-2011	SL-140-SA8N-SS-0.0-0.5	6262835	N	3550B	8082	III
19-Apr-2011	SL-140-SA8N-SS-0.0-0.5	6262835	N	3550B	8270C	III
19-Apr-2011	SL-140-SA8N-SS-0.0-0.5	6262835	N	3550B	8270C SIM	III
19-Apr-2011	SL-140-SA8N-SS-0.0-0.5	6262835	N	8330	8330A	III
19-Apr-2011	SL-140-SA8N-SS-0.0-0.5	6262835	N	METHOD	300.0	III
19-Apr-2011	SL-140-SA8N-SS-0.0-0.5	6262835	N	METHOD	314.0	III
19-Apr-2011	SL-140-SA8N-SS-0.0-0.5	6262835	N	METHOD	7471A	III
19-Apr-2011	SL-140-SA8N-SS-0.0-0.5	6262835	N	METHOD	8015B	III
19-Apr-2011	SL-140-SA8N-SS-0.0-0.5	6262835	N	METHOD	8015M	III
19-Apr-2011	SL-140-SA8N-SS-0.0-0.5	6262835	N	METHOD	8315A	III
19-Apr-2011	SL-140-SA8N-SS-0.0-0.5	6262835	N	METHOD	9012B	III
19-Apr-2011	SL-077-SA8N-SS-0.0-0.5	6262821	N	3050B	6010B	III
19-Apr-2011	SL-077-SA8N-SS-0.0-0.5	6262821	N	3050B	6020	III
19-Apr-2011	SL-077-SA8N-SS-0.0-0.5	6262821	N	3060A	7199	III
19-Apr-2011	SL-077-SA8N-SS-0.0-0.5	6262821	N	3546	1625C	III
19-Apr-2011	SL-077-SA8N-SS-0.0-0.5	6262821	N	3550B	8015B	III
19-Apr-2011	SL-077-SA8N-SS-0.0-0.5	6262821	N	3550B	8015M	III
19-Apr-2011	SL-077-SA8N-SS-0.0-0.5	6262821	N	3550B	8082	III
19-Apr-2011	SL-077-SA8N-SS-0.0-0.5	6262821	N	3550B	8270C	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Apr-2011	SL-077-SA8N-SS-0.0-0.5	6262821	N	3550B	8270C SIM	III
19-Apr-2011	SL-077-SA8N-SS-0.0-0.5	6262821	N	8330	8330A	III
19-Apr-2011	SL-077-SA8N-SS-0.0-0.5	6262821	N	METHOD	300.0	III
19-Apr-2011	SL-077-SA8N-SS-0.0-0.5	6262821	N	METHOD	314.0	III
19-Apr-2011	SL-077-SA8N-SS-0.0-0.5	6262821	N	METHOD	7471A	III
19-Apr-2011	SL-077-SA8N-SS-0.0-0.5	6262821	N	METHOD	8015B	III
19-Apr-2011	SL-077-SA8N-SS-0.0-0.5	6262821	N	METHOD	8015M	III
19-Apr-2011	SL-077-SA8N-SS-0.0-0.5	6262821	N	METHOD	8315A	III
19-Apr-2011	SL-077-SA8N-SS-0.0-0.5	6262821	N	METHOD	9012B	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5	6262830	N	3050B	6010B	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5	6262830	N	3050B	6020	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5	6262830	N	3060A	7199	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5	6262830	N	3546	1625C	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5	6262830	N	3550B	8015B	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5	6262830	N	3550B	8015M	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5	6262830	N	3550B	8082	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5	6262830	N	3550B	8270C	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5	6262830	N	3550B	8270C SIM	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5	6262830	N	8330	8330A	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5	6262830	N	METHOD	300.0	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5	6262830	N	METHOD	314.0	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5	6262830	N	METHOD	7471A	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5	6262830	N	METHOD	8015B	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5	6262830	N	METHOD	8015M	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5	6262830	N	METHOD	8315A	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5	6262830	N	METHOD	9012B	III

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MS	6262831	MS	3050B	6010B	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MS	6262831	MS	3050B	6020	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MS	6262831	MS	3060A	7199	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MS	6262831	MS	3546	1625C	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MS	6262831	MS	3550B	8015B	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MS	6262831	MS	3550B	8015M	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MS	6262831	MS	3550B	8082	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MS	6262831	MS	3550B	8270C	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MS	6262831	MS	3550B	8270C SIM	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MS	6262831	MS	8330	8330A	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MS	6262831	MS	METHOD	300.0	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MS	6262831	MS	METHOD	314.0	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MS	6262831	MS	METHOD	7471A	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MS	6262831	MS	METHOD	8015B	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MS	6262831	MS	METHOD	8015M	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MS	6262831	MS	METHOD	8315A	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MS	6262831	MS	METHOD	9012B	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MSD	6262832	MSD	3050B	6010B	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MSD	6262832	MSD	3050B	6020	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MSD	6262832	MSD	3546	1625C	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MSD	6262832	MSD	3550B	8015B	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MSD	6262832	MSD	3550B	8015M	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MSD	6262832	MSD	3550B	8082	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MSD	6262832	MSD	3550B	8270C	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MSD	6262832	MSD	3550B	8270C SIM	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MSD	6262832	MSD	8330	8330A	III

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MSD	6262832	MSD	METHOD	7471A	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MSD	6262832	MSD	METHOD	8015B	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MSD	6262832	MSD	METHOD	8015M	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5MSD	6262832	MSD	METHOD	8315A	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5DUP	6262833	DUP	3050B	6010B	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5DUP	6262833	DUP	3050B	6020	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5DUP	6262833	DUP	3060A	7199	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5DUP	6262833	DUP	METHOD	300.0	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5DUP	6262833	DUP	METHOD	314.0	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5DUP	6262833	DUP	METHOD	7471A	III
19-Apr-2011	SL-138-SA8N-SS-0.0-0.5DUP	6262833	DUP	METHOD	9012B	III
19-Apr-2011	DUP04-SA8N-QC-041911	6262836	FD	3050B	6010B	III
19-Apr-2011	DUP04-SA8N-QC-041911	6262836	FD	3050B	6020	III
19-Apr-2011	DUP04-SA8N-QC-041911	6262836	FD	3060A	7199	III
19-Apr-2011	DUP04-SA8N-QC-041911	6262836	FD	3546	1625C	III
19-Apr-2011	DUP04-SA8N-QC-041911	6262836	FD	3550B	8015B	III
19-Apr-2011	DUP04-SA8N-QC-041911	6262836	FD	3550B	8015M	III
19-Apr-2011	DUP04-SA8N-QC-041911	6262836	FD	3550B	8082	III
19-Apr-2011	DUP04-SA8N-QC-041911	6262836	FD	3550B	8270C	III
19-Apr-2011	DUP04-SA8N-QC-041911	6262836	FD	3550B	8270C SIM	III
19-Apr-2011	DUP04-SA8N-QC-041911	6262836	FD	8330	8330A	III
19-Apr-2011	DUP04-SA8N-QC-041911	6262836	FD	METHOD	300.0	III
19-Apr-2011	DUP04-SA8N-QC-041911	6262836	FD	METHOD	314.0	III
19-Apr-2011	DUP04-SA8N-QC-041911	6262836	FD	METHOD	7471A	III
19-Apr-2011	DUP04-SA8N-QC-041911	6262836	FD	METHOD	8015B	III
19-Apr-2011	DUP04-SA8N-QC-041911	6262836	FD	METHOD	8015M	III

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Apr-2011	DUP04-SA8N-QC-041911	6262836	FD	METHOD	8315A	III
19-Apr-2011	DUP04-SA8N-QC-041911	6262836	FD	METHOD	9012B	III
19-Apr-2011	SL-127-SA5A-SB-2.0-3.0	6262839	N	3050B	6010B	III
19-Apr-2011	SL-127-SA5A-SB-2.0-3.0	6262839	N	3050B	6020	III
19-Apr-2011	SL-127-SA5A-SB-2.0-3.0	6262839	N	3060A	7199	III
19-Apr-2011	SL-127-SA5A-SB-2.0-3.0	6262839	N	3550B	8082	III
19-Apr-2011	SL-127-SA5A-SB-2.0-3.0	6262839	N	3550B	8270C	III
19-Apr-2011	SL-127-SA5A-SB-2.0-3.0	6262839	N	3550B	8270C SIM	III
19-Apr-2011	SL-127-SA5A-SB-2.0-3.0	6262839	N	5035	8260B	III
19-Apr-2011	SL-127-SA5A-SB-2.0-3.0	6262839	N	5035	8260B SIM	III
19-Apr-2011	SL-127-SA5A-SB-2.0-3.0	6262839	N	METHOD	300.0	III
19-Apr-2011	SL-127-SA5A-SB-2.0-3.0	6262839	N	METHOD	314.0	III
19-Apr-2011	SL-127-SA5A-SB-2.0-3.0	6262839	N	METHOD	7471A	III
19-Apr-2011	SL-139-SA8N-SS-0.0-0.5	6262834	N	3050B	6010B	III
19-Apr-2011	SL-139-SA8N-SS-0.0-0.5	6262834	N	3050B	6020	III
19-Apr-2011	SL-139-SA8N-SS-0.0-0.5	6262834	N	3060A	7199	III
19-Apr-2011	SL-139-SA8N-SS-0.0-0.5	6262834	N	3546	1625C	III
19-Apr-2011	SL-139-SA8N-SS-0.0-0.5	6262834	N	3550B	8015B	III
19-Apr-2011	SL-139-SA8N-SS-0.0-0.5	6262834	N	3550B	8015M	III
19-Apr-2011	SL-139-SA8N-SS-0.0-0.5	6262834	N	3550B	8082	III
19-Apr-2011	SL-139-SA8N-SS-0.0-0.5	6262834	N	3550B	8270C	III
19-Apr-2011	SL-139-SA8N-SS-0.0-0.5	6262834	N	3550B	8270C SIM	III
19-Apr-2011	SL-139-SA8N-SS-0.0-0.5	6262834	N	8330	8330A	III
19-Apr-2011	SL-139-SA8N-SS-0.0-0.5	6262834	N	METHOD	300.0	III
19-Apr-2011	SL-139-SA8N-SS-0.0-0.5	6262834	N	METHOD	314.0	III
19-Apr-2011	SL-139-SA8N-SS-0.0-0.5	6262834	N	METHOD	7471A	III

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Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Apr-2011	SL-139-SA8N-SS-0.0-0.5	6262834	N	METHOD	8015B	III
19-Apr-2011	SL-139-SA8N-SS-0.0-0.5	6262834	N	METHOD	8015M	III
19-Apr-2011	SL-139-SA8N-SS-0.0-0.5	6262834	N	METHOD	8315A	III
19-Apr-2011	SL-139-SA8N-SS-0.0-0.5	6262834	N	METHOD	9012B	III
19-Apr-2011	EB06-SA8N-SS-041911	6262841	EB	3005A	6010B	III
19-Apr-2011	EB06-SA8N-SS-041911	6262841	EB	3020A	6020	III
19-Apr-2011	EB06-SA8N-SS-041911	6262841	EB	3510C	8015B	III
19-Apr-2011	EB06-SA8N-SS-041911	6262841	EB	3510C	8015M	III
19-Apr-2011	EB06-SA8N-SS-041911	6262841	EB	3510C	8082	III
19-Apr-2011	EB06-SA8N-SS-041911	6262841	EB	3510C	8270C	III
19-Apr-2011	EB06-SA8N-SS-041911	6262841	EB	3510C	8270C SIM	III
19-Apr-2011	EB06-SA8N-SS-041911	6262841	EB	3520C	1625C	III
19-Apr-2011	EB06-SA8N-SS-041911	6262841	EB	8330	8330A	III
19-Apr-2011	EB06-SA8N-SS-041911	6262841	EB	Gen Prep	300.0	III
19-Apr-2011	EB06-SA8N-SS-041911	6262841	EB	Gen Prep	314.0	III
19-Apr-2011	EB06-SA8N-SS-041911	6262841	EB	Gen Prep	7199	III
19-Apr-2011	EB06-SA8N-SS-041911	6262841	EB	Gen Prep	8015B	III
19-Apr-2011	EB06-SA8N-SS-041911	6262841	EB	Gen Prep	8015M	III
19-Apr-2011	EB06-SA8N-SS-041911	6262841	EB	METHOD	7470A	III
19-Apr-2011	EB06-SA8N-SS-041911	6262841	EB	METHOD	8315A	III
19-Apr-2011	EB06-SA8N-SS-041911	6262841	EB	METHOD	9012B	III
19-Apr-2011	SL-126-SA5A-SB-4.0-5.0	6262838	N	3050B	6010B	III
19-Apr-2011	SL-126-SA5A-SB-4.0-5.0	6262838	N	3050B	6020	III
19-Apr-2011	SL-126-SA5A-SB-4.0-5.0	6262838	N	3060A	7199	III
19-Apr-2011	SL-126-SA5A-SB-4.0-5.0	6262838	N	3550B	8082	III
19-Apr-2011	SL-126-SA5A-SB-4.0-5.0	6262838	N	3550B	8270C	III

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Apr-2011	SL-126-SA5A-SB-4.0-5.0	6262838	N	3550B	8270C SIM	III
19-Apr-2011	SL-126-SA5A-SB-4.0-5.0	6262838	N	5035	8260B	III
19-Apr-2011	SL-126-SA5A-SB-4.0-5.0	6262838	N	5035	8260B SIM	III
19-Apr-2011	SL-126-SA5A-SB-4.0-5.0	6262838	N	METHOD	300.0	III
19-Apr-2011	SL-126-SA5A-SB-4.0-5.0	6262838	N	METHOD	314.0	III
19-Apr-2011	SL-126-SA5A-SB-4.0-5.0	6262838	N	METHOD	7471A	III
19-Apr-2011	EB14-SA5A-SB-041911	6262842	EB	3510C	8015B	III
19-Apr-2011	EB14-SA5A-SB-041911	6262842	EB	3510C	8015M	III
19-Apr-2011	EB14-SA5A-SB-041911	6262842	EB	3520C	1625C	III
19-Apr-2011	EB14-SA5A-SB-041911	6262842	EB	5030B	8015M	III
19-Apr-2011	EB14-SA5A-SB-041911	6262842	EB	8330	8330A	III
19-Apr-2011	EB14-SA5A-SB-041911	6262842	EB	Gen Prep	300.0	III
19-Apr-2011	EB14-SA5A-SB-041911	6262842	EB	Gen Prep	8015B	III
19-Apr-2011	EB14-SA5A-SB-041911	6262842	EB	Gen Prep	8015M	III
19-Apr-2011	EB14-SA5A-SB-041911	6262842	EB	METHOD	8315A	III
19-Apr-2011	EB14-SA5A-SB-041911	6262842	EB	METHOD	9012B	III
19-Apr-2011	SL-122-SA8N-SS-0.0-0.5	6262828	N	3050B	6010B	III
19-Apr-2011	SL-122-SA8N-SS-0.0-0.5	6262828	N	3050B	6020	III
19-Apr-2011	SL-122-SA8N-SS-0.0-0.5	6262828	N	3060A	7199	III
19-Apr-2011	SL-122-SA8N-SS-0.0-0.5	6262828	N	3546	1625C	III
19-Apr-2011	SL-122-SA8N-SS-0.0-0.5	6262828	N	3550B	8015B	III
19-Apr-2011	SL-122-SA8N-SS-0.0-0.5	6262828	N	3550B	8015M	III
19-Apr-2011	SL-122-SA8N-SS-0.0-0.5	6262828	N	3550B	8082	III
19-Apr-2011	SL-122-SA8N-SS-0.0-0.5	6262828	N	3550B	8270C	III
19-Apr-2011	SL-122-SA8N-SS-0.0-0.5	6262828	N	3550B	8270C SIM	III
19-Apr-2011	SL-122-SA8N-SS-0.0-0.5	6262828	N	8330	8330A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Apr-2011	SL-122-SA8N-SS-0.0-0.5	6262828	N	METHOD	300.0	III
19-Apr-2011	SL-122-SA8N-SS-0.0-0.5	6262828	N	METHOD	314.0	III
19-Apr-2011	SL-122-SA8N-SS-0.0-0.5	6262828	N	METHOD	7471A	III
19-Apr-2011	SL-122-SA8N-SS-0.0-0.5	6262828	N	METHOD	8015B	III
19-Apr-2011	SL-122-SA8N-SS-0.0-0.5	6262828	N	METHOD	8015M	III
19-Apr-2011	SL-122-SA8N-SS-0.0-0.5	6262828	N	METHOD	8315A	III
19-Apr-2011	SL-122-SA8N-SS-0.0-0.5	6262828	N	METHOD	9012B	III
19-Apr-2011	SL-092-SA8N-SS-0.0-0.5	6262822	N	3050B	6010B	III
19-Apr-2011	SL-092-SA8N-SS-0.0-0.5	6262822	N	3050B	6020	III
19-Apr-2011	SL-092-SA8N-SS-0.0-0.5	6262822	N	3060A	7199	III
19-Apr-2011	SL-092-SA8N-SS-0.0-0.5	6262822	N	3546	1625C	III
19-Apr-2011	SL-092-SA8N-SS-0.0-0.5	6262822	N	3550B	8015B	III
19-Apr-2011	SL-092-SA8N-SS-0.0-0.5	6262822	N	3550B	8015M	III
19-Apr-2011	SL-092-SA8N-SS-0.0-0.5	6262822	N	3550B	8082	III
19-Apr-2011	SL-092-SA8N-SS-0.0-0.5	6262822	N	3550B	8270C	III
19-Apr-2011	SL-092-SA8N-SS-0.0-0.5	6262822	N	3550B	8270C SIM	III
19-Apr-2011	SL-092-SA8N-SS-0.0-0.5	6262822	N	8330	8330A	III
19-Apr-2011	SL-092-SA8N-SS-0.0-0.5	6262822	N	METHOD	300.0	III
19-Apr-2011	SL-092-SA8N-SS-0.0-0.5	6262822	N	METHOD	314.0	III
19-Apr-2011	SL-092-SA8N-SS-0.0-0.5	6262822	N	METHOD	7471A	III
19-Apr-2011	SL-092-SA8N-SS-0.0-0.5	6262822	N	METHOD	8015B	III
19-Apr-2011	SL-092-SA8N-SS-0.0-0.5	6262822	N	METHOD	8015M	III
19-Apr-2011	SL-092-SA8N-SS-0.0-0.5	6262822	N	METHOD	8315A	III
19-Apr-2011	SL-092-SA8N-SS-0.0-0.5	6262822	N	METHOD	9012B	III
19-Apr-2011	SL-093-SA8N-SS-0.0-0.5	6262823	N	3050B	6010B	III
19-Apr-2011	SL-093-SA8N-SS-0.0-0.5	6262823	N	3050B	6020	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Apr-2011	SL-093-SA8N-SS-0.0-0.5	6262823	N	3060A	7199	III
19-Apr-2011	SL-093-SA8N-SS-0.0-0.5	6262823	N	3546	1625C	III
19-Apr-2011	SL-093-SA8N-SS-0.0-0.5	6262823	N	3550B	8015B	III
19-Apr-2011	SL-093-SA8N-SS-0.0-0.5	6262823	N	3550B	8015M	III
19-Apr-2011	SL-093-SA8N-SS-0.0-0.5	6262823	N	3550B	8082	III
19-Apr-2011	SL-093-SA8N-SS-0.0-0.5	6262823	N	3550B	8270C	III
19-Apr-2011	SL-093-SA8N-SS-0.0-0.5	6262823	N	3550B	8270C SIM	III
19-Apr-2011	SL-093-SA8N-SS-0.0-0.5	6262823	N	8330	8330A	III
19-Apr-2011	SL-093-SA8N-SS-0.0-0.5	6262823	N	METHOD	300.0	III
19-Apr-2011	SL-093-SA8N-SS-0.0-0.5	6262823	N	METHOD	314.0	III
19-Apr-2011	SL-093-SA8N-SS-0.0-0.5	6262823	N	METHOD	7471A	III
19-Apr-2011	SL-093-SA8N-SS-0.0-0.5	6262823	N	METHOD	8015B	III
19-Apr-2011	SL-093-SA8N-SS-0.0-0.5	6262823	N	METHOD	8015M	III
19-Apr-2011	SL-093-SA8N-SS-0.0-0.5	6262823	N	METHOD	8315A	III
19-Apr-2011	SL-093-SA8N-SS-0.0-0.5	6262823	N	METHOD	9012B	III
19-Apr-2011	SL-076-SA8N-SS-0.0-0.5	6262820	N	3050B	6010B	III
19-Apr-2011	SL-076-SA8N-SS-0.0-0.5	6262820	N	3050B	6020	III
19-Apr-2011	SL-076-SA8N-SS-0.0-0.5	6262820	N	3060A	7199	III
19-Apr-2011	SL-076-SA8N-SS-0.0-0.5	6262820	N	3546	1625C	III
19-Apr-2011	SL-076-SA8N-SS-0.0-0.5	6262820	N	3550B	8015B	III
19-Apr-2011	SL-076-SA8N-SS-0.0-0.5	6262820	N	3550B	8015M	III
19-Apr-2011	SL-076-SA8N-SS-0.0-0.5	6262820	N	3550B	8082	III
19-Apr-2011	SL-076-SA8N-SS-0.0-0.5	6262820	N	3550B	8270C	III
19-Apr-2011	SL-076-SA8N-SS-0.0-0.5	6262820	N	3550B	8270C SIM	III
19-Apr-2011	SL-076-SA8N-SS-0.0-0.5	6262820	N	8330	8330A	III
19-Apr-2011	SL-076-SA8N-SS-0.0-0.5	6262820	N	METHOD	300.0	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Apr-2011	SL-076-SA8N-SS-0.0-0.5	6262820	N	METHOD	314.0	III
19-Apr-2011	SL-076-SA8N-SS-0.0-0.5	6262820	N	METHOD	7471A	III
19-Apr-2011	SL-076-SA8N-SS-0.0-0.5	6262820	N	METHOD	8015B	III
19-Apr-2011	SL-076-SA8N-SS-0.0-0.5	6262820	N	METHOD	8015M	III
19-Apr-2011	SL-076-SA8N-SS-0.0-0.5	6262820	N	METHOD	8315A	III
19-Apr-2011	SL-076-SA8N-SS-0.0-0.5	6262820	N	METHOD	9012B	III
19-Apr-2011	SL-095-SA8N-SS-0.0-0.5	6262825	N	3050B	6010B	III
19-Apr-2011	SL-095-SA8N-SS-0.0-0.5	6262825	N	3050B	6020	III
19-Apr-2011	SL-095-SA8N-SS-0.0-0.5	6262825	N	3060A	7199	III
19-Apr-2011	SL-095-SA8N-SS-0.0-0.5	6262825	N	3550B	8082	III
19-Apr-2011	SL-095-SA8N-SS-0.0-0.5	6262825	N	3550B	8270C	III
19-Apr-2011	SL-095-SA8N-SS-0.0-0.5	6262825	N	3550B	8270C SIM	III
19-Apr-2011	SL-095-SA8N-SS-0.0-0.5	6262825	N	METHOD	300.0	III
19-Apr-2011	SL-095-SA8N-SS-0.0-0.5	6262825	N	METHOD	314.0	III
19-Apr-2011	SL-095-SA8N-SS-0.0-0.5	6262825	N	METHOD	7471A	III
19-Apr-2011	SL-094-SA8N-SS-0.0-0.5	6262824	N	3050B	6010B	III
19-Apr-2011	SL-094-SA8N-SS-0.0-0.5	6262824	N	3050B	6020	III
19-Apr-2011	SL-094-SA8N-SS-0.0-0.5	6262824	N	3060A	7199	III
19-Apr-2011	SL-094-SA8N-SS-0.0-0.5	6262824	N	3550B	8082	III
19-Apr-2011	SL-094-SA8N-SS-0.0-0.5	6262824	N	3550B	8270C	III
19-Apr-2011	SL-094-SA8N-SS-0.0-0.5	6262824	N	3550B	8270C SIM	III
19-Apr-2011	SL-094-SA8N-SS-0.0-0.5	6262824	N	METHOD	300.0	III
19-Apr-2011	SL-094-SA8N-SS-0.0-0.5	6262824	N	METHOD	314.0	III
19-Apr-2011	SL-094-SA8N-SS-0.0-0.5	6262824	N	METHOD	7471A	III
19-Apr-2011	SL-096-SA8N-SS-0.0-0.5	6262826	N	3050B	6010B	III
19-Apr-2011	SL-096-SA8N-SS-0.0-0.5	6262826	N	3050B	6020	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Apr-2011	SL-096-SA8N-SS-0.0-0.5	6262826	N	3060A	7199	III
19-Apr-2011	SL-096-SA8N-SS-0.0-0.5	6262826	N	3550B	8082	III
19-Apr-2011	SL-096-SA8N-SS-0.0-0.5	6262826	N	3550B	8270C	III
19-Apr-2011	SL-096-SA8N-SS-0.0-0.5	6262826	N	3550B	8270C SIM	III
19-Apr-2011	SL-096-SA8N-SS-0.0-0.5	6262826	N	METHOD	300.0	III
19-Apr-2011	SL-096-SA8N-SS-0.0-0.5	6262826	N	METHOD	314.0	III
19-Apr-2011	SL-096-SA8N-SS-0.0-0.5	6262826	N	METHOD	7471A	III
19-Apr-2011	SL-097-SA8N-SS-0.0-0.5	6262827	N	3050B	6010B	III
19-Apr-2011	SL-097-SA8N-SS-0.0-0.5	6262827	N	3050B	6020	III
19-Apr-2011	SL-097-SA8N-SS-0.0-0.5	6262827	N	3060A	7199	III
19-Apr-2011	SL-097-SA8N-SS-0.0-0.5	6262827	N	3550B	8082	III
19-Apr-2011	SL-097-SA8N-SS-0.0-0.5	6262827	N	3550B	8270C	III
19-Apr-2011	SL-097-SA8N-SS-0.0-0.5	6262827	N	3550B	8270C SIM	III
19-Apr-2011	SL-097-SA8N-SS-0.0-0.5	6262827	N	METHOD	300.0	III
19-Apr-2011	SL-097-SA8N-SS-0.0-0.5	6262827	N	METHOD	314.0	III
19-Apr-2011	SL-097-SA8N-SS-0.0-0.5	6262827	N	METHOD	7471A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory:** LL

EDD Filename: PrepDE131_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: DUP04-SA8N-QC-041911 *Collected:* 4/19/2011 11:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.88	U	0.88	MDL	1.1	PQL	mg/Kg	UJ	Q

Sample ID: SL-075-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 8:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.9		0.93	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-076-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 2:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.6		0.90	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.2	J	0.90	MDL	1.7	PQL	mg/Kg	J	Z

Sample ID: SL-077-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 10:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.1		1.0	MDL	1.3	PQL	mg/Kg	J	Q

Sample ID: SL-092-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.1		0.89	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-093-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.6		0.91	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-094-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.1		0.86	MDL	1.1	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **GENCHEM**

Method: **300.0** ***Matrix:*** **SO**

Sample ID: SL-095-SA8N-SS-0.0-0.5 ***Collected:*** 4/19/2011 3:00:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.3		0.90	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-096-SA8N-SS-0.0-0.5 ***Collected:*** 4/19/2011 3:25:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.8		0.86	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-097-SA8N-SS-0.0-0.5 ***Collected:*** 4/19/2011 3:40:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.7		0.92	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-122-SA8N-SS-0.0-0.5 ***Collected:*** 4/19/2011 1:15:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.84	U	0.84	MDL	1.0	PQL	mg/Kg	UJ	Q

Sample ID: SL-126-SA5A-SB-4.0-5.0 ***Collected:*** 4/19/2011 12:27:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.7		0.93	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-127-SA5A-SB-2.0-3.0 ***Collected:*** 4/19/2011 11:17:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.90	U	0.90	MDL	1.1	PQL	mg/Kg	UJ	Q

Sample ID: SL-135-SA8N-SS-0.0-0.5 ***Collected:*** 4/19/2011 9:15:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.4		0.88	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-138-SA8N-SS-0.0-0.5 ***Collected:*** 4/19/2011 11:00:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.87	U	0.87	MDL	1.1	PQL	mg/Kg	UJ	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: GENCHEM

Method: 300.0 **Matrix: SO**

Sample ID: SL-139-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 11:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.84	U	0.84	MDL	1.0	PQL	mg/Kg	UJ	Q

Sample ID: SL-140-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 9:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.92	U	0.92	MDL	1.1	PQL	mg/Kg	UJ	Q

Sample ID: SL-171-SA5A-SB-2.0-3.0 *Collected:* 4/19/2011 9:42:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.6		0.97	MDL	1.2	PQL	mg/Kg	J	Q

Method Category: METALS

Method: 6010B **Matrix: AQ**

Sample ID: EB06-SA8N-SS-041911 *Collected:* 4/19/2011 12:00:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	0.0211	J	0.0138	MDL	0.0500	PQL	mg/L	U	B
CALCIUM	0.0796	J	0.0702	MDL	0.200	PQL	mg/L	J	Z

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: DUP04-SA8N-QC-041911 *Collected:* 4/19/2011 11:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	0.965	U	0.965	MDL	5.42	PQL	mg/Kg	UJ	FD
SODIUM	67.8	J	40.4	MDL	108	PQL	mg/Kg	J	Z
TIN	2.28	J	1.08	MDL	10.8	PQL	mg/Kg	U	B
Zirconium	1.51	J	0.911	MDL	5.42	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-075-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 8:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	7.50		1.04	MDL	5.82	PQL	mg/Kg	U	F
TIN	2.35	J	1.16	MDL	11.6	PQL	mg/Kg	U	B
Zirconium	3.10	J	0.978	MDL	5.82	PQL	mg/Kg	J	Z

Sample ID: SL-076-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 2:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	1.64	J	0.991	MDL	5.57	PQL	mg/Kg	U	F
TIN	2.56	J	1.11	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	2.78	J	0.936	MDL	5.57	PQL	mg/Kg	J	Z

Sample ID: SL-077-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 10:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	2.67	J	1.13	MDL	6.37	PQL	mg/Kg	U	F
TIN	3.00	J	1.27	MDL	12.7	PQL	mg/Kg	U	B
Zirconium	3.17	J	1.07	MDL	6.37	PQL	mg/Kg	J	Z

Sample ID: SL-092-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	85.5	J	41.6	MDL	112	PQL	mg/Kg	J	Z
TIN	2.51	J	1.12	MDL	11.2	PQL	mg/Kg	U	B
Zirconium	1.80	J	0.938	MDL	5.58	PQL	mg/Kg	J	Z

Sample ID: SL-093-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	1.75	J	0.997	MDL	5.60	PQL	mg/Kg	U	F
SODIUM	76.2	J	41.8	MDL	112	PQL	mg/Kg	J	Z
TIN	2.46	J	1.12	MDL	11.2	PQL	mg/Kg	U	B
Zirconium	1.24	J	0.941	MDL	5.60	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory:** LL

EDD Filename: PrepDE131_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-094-SA8N-SS-0.0-0.5 **Collected:** 4/19/2011 3:15:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.41	J	0.951	MDL	5.34	PQL	mg/Kg	U	F
SODIUM	84.0	J	39.8	MDL	107	PQL	mg/Kg	J	Z
TIN	2.56	J	1.07	MDL	10.7	PQL	mg/Kg	U	B
Zirconium	3.61	J	0.897	MDL	5.34	PQL	mg/Kg	J	Z

Sample ID: SL-095-SA8N-SS-0.0-0.5 **Collected:** 4/19/2011 3:00:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	2.84	J	1.01	MDL	5.66	PQL	mg/Kg	U	F
SODIUM	77.9	J	42.2	MDL	113	PQL	mg/Kg	J	Z
TIN	2.53	J	1.13	MDL	11.3	PQL	mg/Kg	U	B
Zirconium	2.88	J	0.950	MDL	5.66	PQL	mg/Kg	J	Z

Sample ID: SL-096-SA8N-SS-0.0-0.5 **Collected:** 4/19/2011 3:25:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.14	J	0.937	MDL	5.27	PQL	mg/Kg	U	F
SODIUM	85.0	J	39.3	MDL	105	PQL	mg/Kg	J	Z
TIN	2.51	J	1.05	MDL	10.5	PQL	mg/Kg	U	B
Zirconium	3.50	J	0.885	MDL	5.27	PQL	mg/Kg	J	Z

Sample ID: SL-097-SA8N-SS-0.0-0.5 **Collected:** 4/19/2011 3:40:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.55	J	1.02	MDL	5.71	PQL	mg/Kg	U	F
SODIUM	94.9	J	42.6	MDL	114	PQL	mg/Kg	J	Z
TIN	2.55	J	1.14	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	3.77	J	0.959	MDL	5.71	PQL	mg/Kg	J	Z

Sample ID: SL-122-SA8N-SS-0.0-0.5 **Collected:** 4/19/2011 1:15:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	1.82	J	0.912	MDL	5.12	PQL	mg/Kg	U	F
SODIUM	65.8	J	38.2	MDL	102	PQL	mg/Kg	J	Z
TIN	2.58	J	1.02	MDL	10.2	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-122-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Zirconium	2.53	J	0.861	MDL	5.12	PQL	mg/Kg	J	Z

Sample ID: SL-126-SA5A-SB-4.0-5.0 *Collected:* 4/19/2011 12:27:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	113	J	42.9	MDL	115	PQL	mg/Kg	J	Z
TIN	3.04	J	1.15	MDL	11.5	PQL	mg/Kg	U	B
Zirconium	1.94	J	0.967	MDL	5.76	PQL	mg/Kg	J	Z

Sample ID: SL-127-SA5A-SB-2.0-3.0 *Collected:* 4/19/2011 11:17:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	62.0	J	41.1	MDL	110	PQL	mg/Kg	J	Z
TIN	2.41	J	1.10	MDL	11.0	PQL	mg/Kg	U	B
Zirconium	1.22	J	0.925	MDL	5.51	PQL	mg/Kg	J	Z

Sample ID: SL-135-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 9:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	1.54	J	0.945	MDL	5.31	PQL	mg/Kg	U	F
SODIUM	65.0	J	39.6	MDL	106	PQL	mg/Kg	J	Z
TIN	2.31	J	1.06	MDL	10.6	PQL	mg/Kg	U	B
Zirconium	1.61	J	0.892	MDL	5.31	PQL	mg/Kg	J	Z

Sample ID: SL-138-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 11:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	1.44	J	0.960	MDL	5.39	PQL	mg/Kg	UJ	FD, F
SODIUM	69.8	J	40.2	MDL	108	PQL	mg/Kg	J	Z
TIN	2.38	J	1.08	MDL	10.8	PQL	mg/Kg	U	B
Zirconium	1.84	J	0.906	MDL	5.39	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-139-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 11:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	70.2	J	38.3	MDL	103	PQL	mg/Kg	J	Z
TIN	2.39	J	1.03	MDL	10.3	PQL	mg/Kg	U	B
Zirconium	1.50	J	0.863	MDL	5.14	PQL	mg/Kg	J	Z

Sample ID: SL-140-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 9:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	1.12	J	0.989	MDL	5.55	PQL	mg/Kg	U	F
SODIUM	77.7	J	41.4	MDL	111	PQL	mg/Kg	J	Z
TIN	2.54	J	1.11	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	2.13	J	0.933	MDL	5.55	PQL	mg/Kg	J	Z

Sample ID: SL-171-SA5A-SB-2.0-3.0 *Collected:* 4/19/2011 9:42:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	81.5	J	44.1	MDL	118	PQL	mg/Kg	J	Z
TIN	2.52	J	1.18	MDL	11.8	PQL	mg/Kg	U	B
Zirconium	1.03	J	0.993	MDL	5.91	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020 **Matrix: AQ**

Sample ID: EB06-SA8N-SS-041911 *Collected:* 4/19/2011 12:00:00 *Analysis Type:* REA5 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	0.00045	J	0.00038	MDL	0.0020	PQL	mg/L	U	B

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: DUP04-SA8N-QC-041911 *Collected:* 4/19/2011 11:05:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.156	J	0.0430	MDL	0.430	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: DUP04-SA8N-QC-041911 *Collected:* 4/19/2011 11:05:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	123		0.116	MDL	0.430	PQL	mg/Kg	J	E, A

Sample ID: DUP04-SA8N-QC-041911 *Collected:* 4/19/2011 11:05:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.123	J	0.0644	MDL	0.215	PQL	mg/Kg	J	Z, Q, E, FD
CADMIUM	0.224		0.0430	MDL	0.107	PQL	mg/Kg	J	Q
COBALT	7.53		0.0215	MDL	0.107	PQL	mg/Kg	J	Q
COPPER	11.7		0.0709	MDL	0.430	PQL	mg/Kg	J	Q
NICKEL	14.1		0.107	MDL	0.430	PQL	mg/Kg	J	Q, A
SILVER	0.0477	J	0.0129	MDL	0.107	PQL	mg/Kg	J	Z, FD

Sample ID: SL-075-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 8:45:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.315	J	0.0461	MDL	0.461	PQL	mg/Kg	J	Z

Sample ID: SL-075-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 8:45:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	127		0.124	MDL	0.461	PQL	mg/Kg	J	E, A

Sample ID: SL-075-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 8:45:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0702	J	0.0692	MDL	0.231	PQL	mg/Kg	J	Z, Q, E
CADMIUM	0.350		0.0461	MDL	0.115	PQL	mg/Kg	J	Q
COBALT	12.5		0.0231	MDL	0.115	PQL	mg/Kg	J	Q
COPPER	19.1		0.0761	MDL	0.461	PQL	mg/Kg	J	Q
NICKEL	22.2		0.115	MDL	0.461	PQL	mg/Kg	J	Q, A
SILVER	0.0324	J	0.0138	MDL	0.115	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-076-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 2:05:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.213		0.0450	MDL	0.112	PQL	mg/Kg	J	Q

Sample ID: SL-076-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 2:05:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.250	J	0.0450	MDL	0.450	PQL	mg/Kg	J	Z

Sample ID: SL-076-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 2:05:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	123		0.121	MDL	0.450	PQL	mg/Kg	J	E, A

Sample ID: SL-076-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 2:05:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.128	J	0.0675	MDL	0.225	PQL	mg/Kg	J	Z, Q, E
COBALT	9.36		0.0225	MDL	0.112	PQL	mg/Kg	J	Q
COPPER	14.4		0.0742	MDL	0.450	PQL	mg/Kg	J	Q
NICKEL	17.0		0.112	MDL	0.450	PQL	mg/Kg	J	Q, A
SILVER	0.0497	J	0.0135	MDL	0.112	PQL	mg/Kg	J	Z

Sample ID: SL-077-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 10:30:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.490	J	0.0500	MDL	0.500	PQL	mg/Kg	J	Z

Sample ID: SL-077-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 10:30:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	198		0.135	MDL	0.500	PQL	mg/Kg	J	E, A

Sample ID: SL-077-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 10:30:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0750	U	0.0750	MDL	0.250	PQL	mg/Kg	UJ	Q, E
CADMIUM	0.390		0.0500	MDL	0.125	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-077-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 10:30:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	11.4		0.0250	MDL	0.125	PQL	mg/Kg	J	Q
COPPER	18.9		0.0825	MDL	0.500	PQL	mg/Kg	J	Q
NICKEL	21.5		0.125	MDL	0.500	PQL	mg/Kg	J	Q, A
SILVER	0.0695	J	0.0150	MDL	0.125	PQL	mg/Kg	J	Z

Sample ID: SL-092-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:35:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.257		0.0425	MDL	0.106	PQL	mg/Kg	J	Q

Sample ID: SL-092-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:35:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.174	J	0.0425	MDL	0.425	PQL	mg/Kg	J	Z

Sample ID: SL-092-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:35:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	129		0.115	MDL	0.425	PQL	mg/Kg	J	E, A

Sample ID: SL-092-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:35:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.127	J	0.0638	MDL	0.213	PQL	mg/Kg	J	Z, Q, E
COBALT	6.80		0.0213	MDL	0.106	PQL	mg/Kg	J	Q
COPPER	11.3		0.0702	MDL	0.425	PQL	mg/Kg	J	Q
NICKEL	12.9		0.106	MDL	0.425	PQL	mg/Kg	J	Q, A
SILVER	0.0490	J	0.0128	MDL	0.106	PQL	mg/Kg	J	Z

Sample ID: SL-093-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:55:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.223	J	0.0448	MDL	0.448	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-093-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:55:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	146		0.121	MDL	0.448	PQL	mg/Kg	J	E, A

Sample ID: SL-093-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:55:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0947	J	0.0672	MDL	0.224	PQL	mg/Kg	J	Z, Q, E
CADMIUM	0.518		0.0448	MDL	0.112	PQL	mg/Kg	J	Q
COBALT	7.76		0.0224	MDL	0.112	PQL	mg/Kg	J	Q
COPPER	15.4		0.0739	MDL	0.448	PQL	mg/Kg	J	Q
NICKEL	16.3		0.112	MDL	0.448	PQL	mg/Kg	J	Q, A

Sample ID: SL-094-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:15:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.202	J	0.0419	MDL	0.419	PQL	mg/Kg	J	Z

Sample ID: SL-094-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:15:00 *Analysis Type:* REA4 *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	134		0.283	MDL	1.05	PQL	mg/Kg	J	E, A

Sample ID: SL-094-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:15:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.144	J	0.0628	MDL	0.209	PQL	mg/Kg	J	Z, Q, E
CADMIUM	0.355		0.0419	MDL	0.105	PQL	mg/Kg	J	Q
COBALT	13.3		0.0209	MDL	0.105	PQL	mg/Kg	J	Q
COPPER	19.7		0.0691	MDL	0.419	PQL	mg/Kg	J	Q
NICKEL	25.8		0.105	MDL	0.419	PQL	mg/Kg	J	Q, A
SILVER	0.0569	J	0.0126	MDL	0.105	PQL	mg/Kg	J	Z

Sample ID: SL-095-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:00:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.153	J	0.0439	MDL	0.439	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-095-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:00:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	163		0.119	MDL	0.439	PQL	mg/Kg	J	E, A

Sample ID: SL-095-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:00:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0666	J	0.0659	MDL	0.220	PQL	mg/Kg	J	Z, Q, E
CADMIUM	0.236		0.0439	MDL	0.110	PQL	mg/Kg	J	Q
COBALT	12.5		0.0220	MDL	0.110	PQL	mg/Kg	J	Q
COPPER	16.9		0.0725	MDL	0.439	PQL	mg/Kg	J	Q
NICKEL	21.2		0.110	MDL	0.439	PQL	mg/Kg	J	Q, A
SILVER	0.0523	J	0.0132	MDL	0.110	PQL	mg/Kg	J	Z

Sample ID: SL-096-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:25:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.150	J	0.0421	MDL	0.421	PQL	mg/Kg	J	Z

Sample ID: SL-096-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:25:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	141		0.114	MDL	0.421	PQL	mg/Kg	J	E, A

Sample ID: SL-096-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:25:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.119	J	0.0632	MDL	0.211	PQL	mg/Kg	J	Z, Q, E
CADMIUM	0.329		0.0421	MDL	0.105	PQL	mg/Kg	J	Q
COBALT	10.2		0.0211	MDL	0.105	PQL	mg/Kg	J	Q
COPPER	15.6		0.0695	MDL	0.421	PQL	mg/Kg	J	Q
NICKEL	19.9		0.105	MDL	0.421	PQL	mg/Kg	J	Q, A
SILVER	0.0370	J	0.0126	MDL	0.105	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-097-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:40:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.308		0.0444	MDL	0.111	PQL	mg/Kg	J	Q

Sample ID: SL-097-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:40:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.177	J	0.0444	MDL	0.444	PQL	mg/Kg	J	Z

Sample ID: SL-097-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:40:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	166		0.120	MDL	0.444	PQL	mg/Kg	J	E, A

Sample ID: SL-097-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:40:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0665	U	0.0665	MDL	0.222	PQL	mg/Kg	UJ	Q, E
COBALT	11.8		0.0222	MDL	0.111	PQL	mg/Kg	J	Q
COPPER	19.5		0.0732	MDL	0.444	PQL	mg/Kg	J	Q
NICKEL	23.4		0.111	MDL	0.444	PQL	mg/Kg	J	Q, A
SILVER	0.0580	J	0.0133	MDL	0.111	PQL	mg/Kg	J	Z

Sample ID: SL-122-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:15:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.147	J	0.0410	MDL	0.410	PQL	mg/Kg	J	Z

Sample ID: SL-122-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:15:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	113		0.111	MDL	0.410	PQL	mg/Kg	J	E, A

Sample ID: SL-122-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:15:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0862	J	0.0615	MDL	0.205	PQL	mg/Kg	J	Z, Q, E
CADMIUM	0.310		0.0410	MDL	0.102	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-122-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:15:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	6.73		0.0205	MDL	0.102	PQL	mg/Kg	J	Q
COPPER	11.0		0.0676	MDL	0.410	PQL	mg/Kg	J	Q
NICKEL	12.7		0.102	MDL	0.410	PQL	mg/Kg	J	Q, A
SILVER	0.0520	J	0.0123	MDL	0.102	PQL	mg/Kg	J	Z

Sample ID: SL-126-SA5A-SB-4.0-5.0 *Collected:* 4/19/2011 12:27:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0674	J	0.0456	MDL	0.456	PQL	mg/Kg	J	Z

Sample ID: SL-126-SA5A-SB-4.0-5.0 *Collected:* 4/19/2011 12:27:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	102		0.123	MDL	0.456	PQL	mg/Kg	J	E, A

Sample ID: SL-126-SA5A-SB-4.0-5.0 *Collected:* 4/19/2011 12:27:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0699	J	0.0684	MDL	0.228	PQL	mg/Kg	J	Z, Q, E
CADMIUM	0.0612	J	0.0456	MDL	0.114	PQL	mg/Kg	J	Z, Q
COBALT	5.67		0.0228	MDL	0.114	PQL	mg/Kg	J	Q
COPPER	7.40		0.0752	MDL	0.456	PQL	mg/Kg	J	Q
NICKEL	13.5		0.114	MDL	0.456	PQL	mg/Kg	J	Q, A
SILVER	0.0569	J	0.0137	MDL	0.114	PQL	mg/Kg	J	Z

Sample ID: SL-127-SA5A-SB-2.0-3.0 *Collected:* 4/19/2011 11:17:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.132		0.0441	MDL	0.110	PQL	mg/Kg	J	Q

Sample ID: SL-127-SA5A-SB-2.0-3.0 *Collected:* 4/19/2011 11:17:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.133	J	0.0441	MDL	0.441	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-127-SA5A-SB-2.0-3.0 *Collected:* 4/19/2011 11:17:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	144		0.119	MDL	0.441	PQL	mg/Kg	J	E, A

Sample ID: SL-127-SA5A-SB-2.0-3.0 *Collected:* 4/19/2011 11:17:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0804	J	0.0661	MDL	0.220	PQL	mg/Kg	J	Z, Q, E
COBALT	8.81		0.0220	MDL	0.110	PQL	mg/Kg	J	Q
COPPER	13.4		0.0727	MDL	0.441	PQL	mg/Kg	J	Q
NICKEL	16.7		0.110	MDL	0.441	PQL	mg/Kg	J	Q, A
SILVER	0.0420	J	0.0132	MDL	0.110	PQL	mg/Kg	J	Z

Sample ID: SL-135-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 9:15:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.184	J	0.0433	MDL	0.433	PQL	mg/Kg	J	Z

Sample ID: SL-135-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 9:15:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	94.4		0.117	MDL	0.433	PQL	mg/Kg	J	E, A

Sample ID: SL-135-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 9:15:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0727	J	0.0650	MDL	0.217	PQL	mg/Kg	J	Z, Q, E
CADMIUM	0.128		0.0433	MDL	0.108	PQL	mg/Kg	J	Q
COBALT	6.21		0.0217	MDL	0.108	PQL	mg/Kg	J	Q
COPPER	8.84		0.0715	MDL	0.433	PQL	mg/Kg	J	Q
NICKEL	11.4		0.108	MDL	0.433	PQL	mg/Kg	J	Q, A
SILVER	0.0146	J	0.0130	MDL	0.108	PQL	mg/Kg	J	Z

Sample ID: SL-138-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 11:00:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.150		0.0436	MDL	0.109	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: **SL-138-SA8N-SS-0.0-0.5** ***Collected:*** **4/19/2011 11:00:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.122	J	0.0436	MDL	0.436	PQL	mg/Kg	J	Z

Sample ID: **SL-138-SA8N-SS-0.0-0.5** ***Collected:*** **4/19/2011 11:00:00** ***Analysis Type:*** **REA4** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	116		0.118	MDL	0.436	PQL	mg/Kg	J	E, A

Sample ID: **SL-138-SA8N-SS-0.0-0.5** ***Collected:*** **4/19/2011 11:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0654	U	0.0654	MDL	0.218	PQL	mg/Kg	UJ	Q, E, FD
COBALT	6.90		0.0218	MDL	0.109	PQL	mg/Kg	J	Q
COPPER	10.1		0.0719	MDL	0.436	PQL	mg/Kg	J	Q
NICKEL	13.2		0.109	MDL	0.436	PQL	mg/Kg	J	Q, A
SILVER	0.0257	J	0.0131	MDL	0.109	PQL	mg/Kg	J	Z, FD

Sample ID: **SL-139-SA8N-SS-0.0-0.5** ***Collected:*** **4/19/2011 11:25:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.106	J	0.0411	MDL	0.411	PQL	mg/Kg	J	Z

Sample ID: **SL-139-SA8N-SS-0.0-0.5** ***Collected:*** **4/19/2011 11:25:00** ***Analysis Type:*** **REA4** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	109		0.111	MDL	0.411	PQL	mg/Kg	J	E, A

Sample ID: **SL-139-SA8N-SS-0.0-0.5** ***Collected:*** **4/19/2011 11:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0617	U	0.0617	MDL	0.206	PQL	mg/Kg	UJ	Q, E
CADMIUM	0.239		0.0411	MDL	0.103	PQL	mg/Kg	J	Q
COBALT	6.51		0.0206	MDL	0.103	PQL	mg/Kg	J	Q
COPPER	9.55		0.0678	MDL	0.411	PQL	mg/Kg	J	Q
NICKEL	12.1		0.103	MDL	0.411	PQL	mg/Kg	J	Q, A
SILVER	0.0434	J	0.0123	MDL	0.103	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-140-SA8N-SS-0.0-0.5 **Collected:** 4/19/2011 9:45:00 **Analysis Type:** REA2 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.204	J	0.0444	MDL	0.444	PQL	mg/Kg	J	Z

Sample ID: SL-140-SA8N-SS-0.0-0.5 **Collected:** 4/19/2011 9:45:00 **Analysis Type:** REA4 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	133		0.120	MDL	0.444	PQL	mg/Kg	J	E, A

Sample ID: SL-140-SA8N-SS-0.0-0.5 **Collected:** 4/19/2011 9:45:00 **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.279		0.0667	MDL	0.222	PQL	mg/Kg	J	Q, E
CADMIUM	0.283		0.0444	MDL	0.111	PQL	mg/Kg	J	Q
COBALT	7.32		0.0222	MDL	0.111	PQL	mg/Kg	J	Q
COPPER	14.0		0.0733	MDL	0.444	PQL	mg/Kg	J	Q
NICKEL	15.1		0.111	MDL	0.444	PQL	mg/Kg	J	Q, A
SILVER	0.0531	J	0.0133	MDL	0.111	PQL	mg/Kg	J	Z

Sample ID: SL-171-SA5A-SB-2.0-3.0 **Collected:** 4/19/2011 9:42:00 **Analysis Type:** REA2 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.182	J	0.0460	MDL	0.460	PQL	mg/Kg	J	Z

Sample ID: SL-171-SA5A-SB-2.0-3.0 **Collected:** 4/19/2011 9:42:00 **Analysis Type:** REA4 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	121		0.124	MDL	0.460	PQL	mg/Kg	J	E, A

Sample ID: SL-171-SA5A-SB-2.0-3.0 **Collected:** 4/19/2011 9:42:00 **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.101	J	0.0689	MDL	0.230	PQL	mg/Kg	J	Z, Q, E
CADMIUM	0.140		0.0460	MDL	0.115	PQL	mg/Kg	J	Q
COBALT	7.16		0.0230	MDL	0.115	PQL	mg/Kg	J	Q
COPPER	11.2		0.0758	MDL	0.460	PQL	mg/Kg	J	Q
NICKEL	15.6		0.115	MDL	0.460	PQL	mg/Kg	J	Q, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-171-SA5A-SB-2.0-3.0 *Collected:* 4/19/2011 9:42:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0596	J	0.0138	MDL	0.115	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: SL-075-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 8:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.50	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-076-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 2:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.50	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-094-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.67	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-126-SA5A-SB-4.0-5.0 *Collected:* 4/19/2011 12:27:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.54	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-140-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 9:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.49	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-171-SA5A-SB-2.0-3.0 *Collected:* 4/19/2011 9:42:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.50	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: DUP04-SA8N-QC-041911 *Collected:* 4/19/2011 11:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0168	J	0.0030	MDL	0.105	PQL	mg/Kg	J	Z

Sample ID: SL-075-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 8:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0139	J	0.0033	MDL	0.116	PQL	mg/Kg	J	Z

Sample ID: SL-076-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 2:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0303	J	0.0030	MDL	0.106	PQL	mg/Kg	J	Z

Sample ID: SL-077-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 10:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0977	J	0.0036	MDL	0.124	PQL	mg/Kg	J	Z

Sample ID: SL-094-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0323	J	0.0030	MDL	0.104	PQL	mg/Kg	J	Z

Sample ID: SL-095-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0151	J	0.0031	MDL	0.109	PQL	mg/Kg	J	Z

Sample ID: SL-096-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0149	J	0.0029	MDL	0.101	PQL	mg/Kg	J	Z

Sample ID: SL-097-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0149	J	0.0031	MDL	0.109	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **METALS**

Method: **7471A** ***Matrix:*** **SO**

Sample ID: **SL-122-SA8N-SS-0.0-0.5** ***Collected:*** **4/19/2011 1:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
MERCURY	0.0209	J	0.0029	MDL	0.101	PQL	mg/Kg	J	Z

Sample ID: **SL-126-SA5A-SB-4.0-5.0** ***Collected:*** **4/19/2011 12:27:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
MERCURY	0.0188	J	0.0031	MDL	0.110	PQL	mg/Kg	J	Z

Sample ID: **SL-127-SA5A-SB-2.0-3.0** ***Collected:*** **4/19/2011 11:17:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
MERCURY	0.0035	J	0.0030	MDL	0.106	PQL	mg/Kg	J	Z

Sample ID: **SL-135-SA8N-SS-0.0-0.5** ***Collected:*** **4/19/2011 9:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
MERCURY	0.0158	J	0.0029	MDL	0.102	PQL	mg/Kg	J	Z

Sample ID: **SL-138-SA8N-SS-0.0-0.5** ***Collected:*** **4/19/2011 11:00:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
MERCURY	0.0181	J	0.0029	MDL	0.102	PQL	mg/Kg	J	Z

Sample ID: **SL-139-SA8N-SS-0.0-0.5** ***Collected:*** **4/19/2011 11:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
MERCURY	0.0089	J	0.0028	MDL	0.0973	PQL	mg/Kg	J	Z

Sample ID: **SL-140-SA8N-SS-0.0-0.5** ***Collected:*** **4/19/2011 9:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
MERCURY	0.0268	J	0.0031	MDL	0.107	PQL	mg/Kg	J	Z

Sample ID: **SL-171-SA5A-SB-2.0-3.0** ***Collected:*** **4/19/2011 9:42:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
MERCURY	0.0103	J	0.0033	MDL	0.114	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory:** LL

EDD Filename: PrepDE131_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7471A **Matrix:** SO

Method Category: SVOA

Method: 1625C **Matrix:** AQ

Sample ID: EB06-SA8N-SS-041911 *Collected:* 4/19/2011 12:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	0.501	U	0.501	MDL	1.00	PQL	ng/L	UJ	L

Sample ID: EB14-SA5A-SB-041911 *Collected:* 4/19/2011 1:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	0.808	J	0.528	MDL	1.06	PQL	ng/L	J	Z, L, S

Method Category: SVOA

Method: 1625C **Matrix:** SO

Sample ID: DUP04-SA8N-QC-041911 *Collected:* 4/19/2011 11:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	43.8		18.3	MDL	36.5	PQL	ng/Kg	U	B

Sample ID: SL-075-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 8:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	303	J	194	MDL	388	PQL	ng/Kg	U	B

Sample ID: SL-076-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 2:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	805		188	MDL	375	PQL	ng/Kg	U	B

Sample ID: SL-077-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 10:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	575		215	MDL	429	PQL	ng/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 1625C **Matrix: SO**

Sample ID: SL-135-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 9:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	27.3	J	18.2	MDL	36.5	PQL	ng/Kg	U	B

Sample ID: SL-138-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 11:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	45.2		18.2	MDL	36.3	PQL	ng/Kg	UJ	Q, B

Sample ID: SL-139-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 11:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	61.6		17.5	MDL	34.9	PQL	ng/Kg	U	B

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: DUP04-SA8N-QC-041911 *Collected:* 4/19/2011 11:05:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.97	J	0.44	MDL	1.3	PQL	mg/Kg	J	Z

Sample ID: SL-075-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 8:45:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIETHYLENE GLYCOL	5.8	U	5.8	MDL	15	PQL	mg/Kg	UJ	Q, Q

Sample ID: SL-077-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 10:30:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.99	J	0.51	MDL	1.5	PQL	mg/Kg	J	Z

Sample ID: SL-122-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:15:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.97	J	0.42	MDL	1.2	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-138-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 11:00:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.85	J	0.43	MDL	1.3	PQL	mg/Kg	J	Z
EFH (C21-C30)	5.8		0.43	MDL	1.3	PQL	mg/Kg	J	Q

Sample ID: SL-140-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 9:45:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	2.6	J	0.92	MDL	2.7	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: DUP04-SA8N-QC-041911 *Collected:* 4/19/2011 11:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	0.89	J	0.36	MDL	1.9	PQL	ug/Kg	J	Z
AROCLOR 1260	0.93	J	0.43	MDL	1.9	PQL	ug/Kg	J	Z
Aroclor 5460	1.9	J	1.1	MDL	3.6	PQL	ug/Kg	J	Z

Sample ID: SL-075-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 8:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	1.2	J	0.38	MDL	2.0	PQL	ug/Kg	J	Z

Sample ID: SL-076-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 2:05:00 *Analysis Type:* RES *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	7.5	J	5.6	MDL	18	PQL	ug/Kg	J	Z

Sample ID: SL-092-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	1.2	J	0.37	MDL	1.9	PQL	ug/Kg	J	Z
Aroclor 5460	1.4	J	1.1	MDL	3.7	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: SL-093-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	6.9	J	2.2	MDL	9.7	PQL	ug/Kg	J	Z
Aroclor 5460	7.6	J	5.7	MDL	19	PQL	ug/Kg	J	Z

Sample ID: SL-094-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	1.1	J	0.36	MDL	1.8	PQL	ug/Kg	J	Z
AROCLOR 1260	0.79	J	0.42	MDL	1.8	PQL	ug/Kg	J	Z
Aroclor 5460	2.7	J	1.1	MDL	3.6	PQL	ug/Kg	J	Z

Sample ID: SL-096-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	0.65	J	0.42	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-122-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	0.70	J	0.34	MDL	1.8	PQL	ug/Kg	J	Z
AROCLOR 1260	1.0	J	0.41	MDL	1.8	PQL	ug/Kg	J	Z
Aroclor 5460	2.3	J	1.0	MDL	3.4	PQL	ug/Kg	J	Z

Sample ID: SL-135-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 9:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	1.2	J	0.42	MDL	1.8	PQL	ug/Kg	J	Z
Aroclor 5460	1.6	J	1.1	MDL	3.6	PQL	ug/Kg	J	Z

Sample ID: SL-138-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 11:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	0.86	J	0.36	MDL	1.8	PQL	ug/Kg	J	Z, S
AROCLOR 1260	1.2	J	0.42	MDL	1.8	PQL	ug/Kg	J	Z, S
Aroclor 5460	2.2	J	1.1	MDL	3.6	PQL	ug/Kg	J	Z, S

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: SL-139-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 11:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	0.75	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z
AROCLOR 1260	0.68	J	0.41	MDL	1.8	PQL	ug/Kg	J	Z
Aroclor 5460	1.7	J	1.0	MDL	3.5	PQL	ug/Kg	J	Z

Sample ID: SL-140-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 9:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	1.5	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z
AROCLOR 1260	1.7	J	0.44	MDL	1.9	PQL	ug/Kg	J	Z
Aroclor 5460	2.5	J	1.1	MDL	3.8	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8270C **Matrix: AQ**

Sample ID: EB06-SA8N-SS-041911 *Collected:* 4/19/2011 12:00:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	6	U	6	MDL	15	PQL	ug/L	UJ	E

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: DUP04-SA8N-QC-041911 *Collected:* 4/19/2011 11:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-BROMOPHENYL-PHENYLETHER	18	U	18	MDL	180	PQL	ug/Kg	UJ	L

Sample ID: SL-075-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 8:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-BROMOPHENYL-PHENYLETHER	19	U	19	MDL	190	PQL	ug/Kg	UJ	L

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-076-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 2:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-BROMOPHENYL-PHENYLETHER	19	U	19	MDL	190	PQL	ug/Kg	UJ	L

Sample ID: SL-077-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 10:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-BROMOPHENYL-PHENYLETHER	21	U	21	MDL	210	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	43	J	21	MDL	420	PQL	ug/Kg	J	Z

Sample ID: SL-092-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-BROMOPHENYL-PHENYLETHER	18	U	18	MDL	180	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	27	J	18	MDL	370	PQL	ug/Kg	J	Z

Sample ID: SL-093-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-BROMOPHENYL-PHENYLETHER	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	32	J	19	MDL	380	PQL	ug/Kg	J	Z

Sample ID: SL-094-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-BROMOPHENYL-PHENYLETHER	18	U	18	MDL	180	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	27	J	18	MDL	360	PQL	ug/Kg	J	Z

Sample ID: SL-095-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-BROMOPHENYL-PHENYLETHER	19	U	19	MDL	190	PQL	ug/Kg	UJ	L

Sample ID: SL-096-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-BROMOPHENYL-PHENYLETHER	18	U	18	MDL	180	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	24	J	18	MDL	360	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-097-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-BROMOPHENYL-PHENYLETHER	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	25	J	19	MDL	380	PQL	ug/Kg	J	Z

Sample ID: SL-122-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-BROMOPHENYL-PHENYLETHER	17	U	17	MDL	170	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	27	J	17	MDL	340	PQL	ug/Kg	J	Z

Sample ID: SL-126-SA5A-SB-4.0-5.0 *Collected:* 4/19/2011 12:27:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-BROMOPHENYL-PHENYLETHER	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	34	J	19	MDL	380	PQL	ug/Kg	J	Z

Sample ID: SL-127-SA5A-SB-2.0-3.0 *Collected:* 4/19/2011 11:17:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-BROMOPHENYL-PHENYLETHER	18	U	18	MDL	180	PQL	ug/Kg	UJ	L

Sample ID: SL-135-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 9:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-BROMOPHENYL-PHENYLETHER	18	U	18	MDL	180	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	20	J	18	MDL	360	PQL	ug/Kg	J	Z

Sample ID: SL-138-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 11:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-BROMOPHENYL-PHENYLETHER	18	U	18	MDL	180	PQL	ug/Kg	UJ	L
BENZIDINE	1300	U	1300	MDL	3600	PQL	ug/Kg	R	Q
BIS(2-ETHYLHEXYL)PHTHALATE	24	J	18	MDL	360	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-139-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 11:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-BROMOPHENYL-PHENYLETHER	17	U	17	MDL	170	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	27	J	17	MDL	340	PQL	ug/Kg	J	Z

Sample ID: SL-140-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 9:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-BROMOPHENYL-PHENYLETHER	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	28	J	19	MDL	380	PQL	ug/Kg	J	Z

Sample ID: SL-171-SA5A-SB-2.0-3.0 *Collected:* 4/19/2011 9:42:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-BROMOPHENYL-PHENYLETHER	20	U	20	MDL	200	PQL	ug/Kg	UJ	L

Method Category: SVOA

Method: 8270C SIM **Matrix: AQ**

Sample ID: EB06-SA8N-SS-041911 *Collected:* 4/19/2011 12:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	0.13	J	0.052	MDL	1.0	PQL	ug/L	J	Z
Diethylphthalate	0.057	J	0.052	MDL	1.0	PQL	ug/L	J	Z
Di-n-butylphthalate	0.30	J	0.052	MDL	1.0	PQL	ug/L	J	Z
Di-n-octylphthalate	0.25	J	0.052	MDL	1.0	PQL	ug/L	J	Z

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: DUP04-SA8N-QC-041911 *Collected:* 4/19/2011 11:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	0.73	U	0.73	MDL	1.8	PQL	ug/Kg	UJ	FD
BENZO(B)FLUORANTHENE	0.73	U	0.73	MDL	1.8	PQL	ug/Kg	UJ	FD
BENZO(K)FLUORANTHENE	0.73	U	0.73	MDL	1.8	PQL	ug/Kg	UJ	FD
CHRYSENE	0.42	J	0.37	MDL	1.8	PQL	ug/Kg	J	Z, FD

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: DUP04-SA8N-QC-041911 *Collected:* 4/19/2011 11:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORANTHENE	0.73	U	0.73	MDL	1.8	PQL	ug/Kg	UJ	FD
PHENANTHRENE	0.73	U	0.73	MDL	1.8	PQL	ug/Kg	UJ	FD
PYRENE	0.73	U	0.73	MDL	1.8	PQL	ug/Kg	UJ	FD

Sample ID: SL-077-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 10:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	1.2	J	0.86	MDL	2.1	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.9	J	0.86	MDL	2.1	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	0.89	J	0.86	MDL	2.1	PQL	ug/Kg	J	Z
Di-n-octylphthalate	10	J	7.7	MDL	23	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.2	J	0.86	MDL	2.1	PQL	ug/Kg	J	Z
NAPHTHALENE	1.3	J	0.86	MDL	2.1	PQL	ug/Kg	J	Z
PHENANTHRENE	2.0	J	0.86	MDL	2.1	PQL	ug/Kg	J	Z
PYRENE	1.9	J	0.86	MDL	2.1	PQL	ug/Kg	J	Z

Sample ID: SL-092-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	1.6	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.1	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
CHRYSENE	1.6	J	0.37	MDL	1.9	PQL	ug/Kg	J	Z
FLUORANTHENE	1.6	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
FLUORENE	1.7	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	0.81	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
PHENANTHRENE	1.2	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
PYRENE	1.0	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-093-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	0.93	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.4	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
FLUORANTHENE	1.6	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
FLUORENE	1.8	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-093-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
INDENO(1,2,3-CD)PYRENE	1.2	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
PHENANTHRENE	1.0	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
PYRENE	1.2	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-095-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	1.3	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	0.87	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
CHRYSENE	1.1	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z
FLUORANTHENE	1.5	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.0	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
PHENANTHRENE	0.89	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
PYRENE	0.98	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-096-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	0.49	J	0.36	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.1	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
CHRYSENE	0.86	J	0.36	MDL	1.8	PQL	ug/Kg	J	Z
FLUORANTHENE	1.3	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	0.84	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
PHENANTHRENE	1.0	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
PYRENE	0.89	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-097-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.92	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
ANTHRACENE	0.88	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	1.1	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	1.2	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.2	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	0.95	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-097-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 3:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	1.6	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-122-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 1:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	0.85	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.2	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
CHRYSENE	1.4	J	0.35	MDL	1.7	PQL	ug/Kg	J	Z
FLUORANTHENE	1.6	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.1	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
PHENANTHRENE	0.86	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
PYRENE	1.2	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: SL-127-SA5A-SB-2.0-3.0 *Collected:* 4/19/2011 11:17:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	0.71	J	0.37	MDL	1.9	PQL	ug/Kg	J	Z
FLUORANTHENE	1.6	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z
PYRENE	1.2	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-138-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 11:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	0.77	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z, FD
BENZO(B)FLUORANTHENE	1.8	J	0.73	MDL	1.8	PQL	ug/Kg	J	FD
BENZO(K)FLUORANTHENE	0.86	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z, FD
CHRYSENE	1.5	J	0.36	MDL	1.8	PQL	ug/Kg	J	Z, FD
FLUORANTHENE	1.7	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z, FD
PHENANTHRENE	0.96	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z, FD
PYRENE	1.1	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z, FD

Sample ID: SL-139-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 11:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.96	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-139-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 11:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	0.84	J	0.35	MDL	1.7	PQL	ug/Kg	J	Z
FLUORANTHENE	1.0	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	0.88	J	0.70	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: SL-140-SA8N-SS-0.0-0.5 *Collected:* 4/19/2011 9:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	1.0	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.3	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.1	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
PHENANTHRENE	1.1	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
PYRENE	1.5	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8315A **Matrix: AQ**

Sample ID: EB06-SA8N-SS-041911 *Collected:* 4/19/2011 12:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	15	J	10	MDL	50	PQL	ug/L	J	Z

Method Category: VOA

Method: 8260B **Matrix: SO**

Sample ID: SL-126-SA5A-SB-4.0-5.0 *Collected:* 4/19/2011 12:27:00 *Analysis Type:* RES *Dilution:* 0.85

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	0.67	J	0.24	MDL	4.0	PQL	ug/Kg	U	B

Sample ID: SL-127-SA5A-SB-2.0-3.0 *Collected:* 4/19/2011 11:17:00 *Analysis Type:* RES *Dilution:* 0.93

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	0.75	J	0.25	MDL	4.2	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **SO**

Sample ID: **SL-171-SA5A-SB-2.0-3.0** ***Collected:*** **4/19/2011 9:42:00** ***Analysis Type:*** **RES** ***Dilution:*** **0.81**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
METHYLENE CHLORIDE	0.65	J	0.24	MDL	3.9	PQL	ug/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
Q	Matrix Spike Upper Rejection

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: PrepDE131_v1 **eQAPP Name: CDM_SSFL_110509**

R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE131

Method Blank Outlier Report

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: **1625C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKLE11B261359	5/2/2011 1:59:00 PM	N-NITROSODIMETHYLAMINE	34.7 ng/Kg	DUP04-SA8N-QC-041911 SL-075-SA8N-SS-0.0-0.5 SL-076-SA8N-SS-0.0-0.5 SL-077-SA8N-SS-0.0-0.5 SL-092-SA8N-SS-0.0-0.5 SL-093-SA8N-SS-0.0-0.5 SL-122-SA8N-SS-0.0-0.5 SL-135-SA8N-SS-0.0-0.5 SL-138-SA8N-SS-0.0-0.5 SL-139-SA8N-SS-0.0-0.5 SL-140-SA8N-SS-0.0-0.5

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP04-SA8N-QC-041911(RES)	N-NITROSODIMETHYLAMINE	43.8 ng/Kg	43.8U ng/Kg
SL-075-SA8N-SS-0.0-0.5(RES)	N-NITROSODIMETHYLAMINE	303 ng/Kg	388U ng/Kg
SL-076-SA8N-SS-0.0-0.5(RES)	N-NITROSODIMETHYLAMINE	805 ng/Kg	805U ng/Kg
SL-077-SA8N-SS-0.0-0.5(RES)	N-NITROSODIMETHYLAMINE	575 ng/Kg	575U ng/Kg
SL-135-SA8N-SS-0.0-0.5(RES)	N-NITROSODIMETHYLAMINE	27.3 ng/Kg	36.5U ng/Kg
SL-138-SA8N-SS-0.0-0.5(RES)	N-NITROSODIMETHYLAMINE	45.2 ng/Kg	45.2U ng/Kg
SL-139-SA8N-SS-0.0-0.5(RES)	N-NITROSODIMETHYLAMINE	61.6 ng/Kg	61.6U ng/Kg

Method: **6010B**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11748AB221924	4/29/2011 7:24:00 PM	BORON	0.0156 mg/L	EB06-SA8N-SS-041911

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
EB06-SA8N-SS-041911(REA2)	BORON	0.0211 mg/L	0.0211U mg/L

Method Blank Outlier Report

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11608BB221536	4/30/2011 3:36:00 PM	CALCIUM	6.24 mg/Kg	DUP04-SA8N-QC-041911
		PHOSPHORUS	1.04 mg/Kg	SL-075-SA8N-SS-0.0-0.5
		TIN	1.61 mg/Kg	SL-076-SA8N-SS-0.0-0.5
				SL-077-SA8N-SS-0.0-0.5
				SL-092-SA8N-SS-0.0-0.5
				SL-093-SA8N-SS-0.0-0.5
				SL-094-SA8N-SS-0.0-0.5
				SL-095-SA8N-SS-0.0-0.5
				SL-096-SA8N-SS-0.0-0.5
				SL-097-SA8N-SS-0.0-0.5
				SL-122-SA8N-SS-0.0-0.5
				SL-126-SA5A-SB-4.0-5.0
				SL-127-SA5A-SB-2.0-3.0
				SL-135-SA8N-SS-0.0-0.5
				SL-138-SA8N-SS-0.0-0.5
				SL-139-SA8N-SS-0.0-0.5
				SL-140-SA8N-SS-0.0-0.5
				SL-171-SA5A-SB-2.0-3.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP04-SA8N-QC-041911(RES)	TIN	2.28 mg/Kg	2.28U mg/Kg
SL-075-SA8N-SS-0.0-0.5(RES)	TIN	2.35 mg/Kg	2.35U mg/Kg
SL-076-SA8N-SS-0.0-0.5(RES)	TIN	2.56 mg/Kg	2.56U mg/Kg
SL-077-SA8N-SS-0.0-0.5(RES)	TIN	3.00 mg/Kg	3.00U mg/Kg
SL-092-SA8N-SS-0.0-0.5(RES)	TIN	2.51 mg/Kg	2.51U mg/Kg
SL-093-SA8N-SS-0.0-0.5(RES)	TIN	2.46 mg/Kg	2.46U mg/Kg
SL-094-SA8N-SS-0.0-0.5(RES)	TIN	2.56 mg/Kg	2.56U mg/Kg
SL-095-SA8N-SS-0.0-0.5(RES)	TIN	2.53 mg/Kg	2.53U mg/Kg
SL-096-SA8N-SS-0.0-0.5(RES)	TIN	2.51 mg/Kg	2.51U mg/Kg
SL-097-SA8N-SS-0.0-0.5(RES)	TIN	2.55 mg/Kg	2.55U mg/Kg
SL-122-SA8N-SS-0.0-0.5(RES)	TIN	2.58 mg/Kg	2.58U mg/Kg
SL-126-SA5A-SB-4.0-5.0(RES)	TIN	3.04 mg/Kg	3.04U mg/Kg
SL-127-SA5A-SB-2.0-3.0(RES)	TIN	2.41 mg/Kg	2.41U mg/Kg
SL-135-SA8N-SS-0.0-0.5(RES)	TIN	2.31 mg/Kg	2.31U mg/Kg
SL-138-SA8N-SS-0.0-0.5(RES)	TIN	2.38 mg/Kg	2.38U mg/Kg
SL-139-SA8N-SS-0.0-0.5(RES)	TIN	2.39 mg/Kg	2.39U mg/Kg
SL-140-SA8N-SS-0.0-0.5(RES)	TIN	2.54 mg/Kg	2.54U mg/Kg
SL-171-SA5A-SB-2.0-3.0(RES)	TIN	2.52 mg/Kg	2.52U mg/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11626BB221103A	4/27/2011 11:03:00 AM	COPPER VANADIUM ZINC	0.107 mg/Kg 0.0888 mg/Kg 0.608 mg/Kg	DUP04-SA8N-QC-041911 SL-075-SA8N-SS-0.0-0.5 SL-076-SA8N-SS-0.0-0.5 SL-077-SA8N-SS-0.0-0.5 SL-092-SA8N-SS-0.0-0.5 SL-093-SA8N-SS-0.0-0.5 SL-094-SA8N-SS-0.0-0.5 SL-095-SA8N-SS-0.0-0.5 SL-096-SA8N-SS-0.0-0.5 SL-097-SA8N-SS-0.0-0.5 SL-122-SA8N-SS-0.0-0.5 SL-126-SA5A-SB-4.0-5.0 SL-127-SA5A-SB-2.0-3.0 SL-135-SA8N-SS-0.0-0.5 SL-138-SA8N-SS-0.0-0.5 SL-139-SA8N-SS-0.0-0.5 SL-140-SA8N-SS-0.0-0.5 SL-171-SA5A-SB-2.0-3.0

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB32B211301A	4/21/2011 1:01:00 PM	METHYLENE CHLORIDE	0.46 ug/Kg	SL-126-SA5A-SB-4.0-5.0 SL-127-SA5A-SB-2.0-3.0 SL-171-SA5A-SB-2.0-3.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-126-SA5A-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	0.67 ug/Kg	4.0U ug/Kg
SL-127-SA5A-SB-2.0-3.0(RES)	METHYLENE CHLORIDE	0.75 ug/Kg	4.2U ug/Kg
SL-171-SA5A-SB-2.0-3.0(RES)	METHYLENE CHLORIDE	0.65 ug/Kg	3.9U ug/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-075-SA8N-SS-0.0-0.5MS SL-075-SA8N-SS-0.0-0.5MSD (SL-075-SA8N-SS-0.0-0.5)	DIETHYLENE GLYCOL	54	-	59.00-109.00	42 (20.00)	DIETHYLENE GLYCOL	J (all detects) UJ (all non-detects)
SL-138-SA8N-SS-0.0-0.5MS SL-138-SA8N-SS-0.0-0.5MSD (SL-138-SA8N-SS-0.0-0.5)	EFH (C21-C30) EFH (C30-C40)	147 159	157 228	49.00-123.00 49.00-123.00	- -	EFH (C21-C30) EFH (C30-C40)	J(all detects) EFH (C30-C40) No Qual, >4x

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-138-SA8N-SS-0.0-0.5MS SL-138-SA8N-SS-0.0-0.5MSD (SL-138-SA8N-SS-0.0-0.5)	4-CHLORO-3-METHYLPHENOL	114	111	76.00-110.00	-	4-CHLORO-3-METHYLPHENOL	J(all detects)
SL-138-SA8N-SS-0.0-0.5MS SL-138-SA8N-SS-0.0-0.5MSD (SL-138-SA8N-SS-0.0-0.5)	BENZIDINE	0	0	35.00-141.00	-	BENZIDINE	J(all detects) R(all non-detects)
SL-138-SA8N-SS-0.0-0.5MSD (SL-138-SA8N-SS-0.0-0.5)	PENTACHLOROPHENOL	-	-	28.00-127.00	38 (30.00)	PENTACHLOROPHENOL	J(all detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-138-SA8N-SS-0.0-0.5MSD (DUP04-SA8N-QC-041911 SL-075-SA8N-SS-0.0-0.5 SL-076-SA8N-SS-0.0-0.5 SL-077-SA8N-SS-0.0-0.5 SL-092-SA8N-SS-0.0-0.5 SL-093-SA8N-SS-0.0-0.5 SL-094-SA8N-SS-0.0-0.5 SL-095-SA8N-SS-0.0-0.5 SL-096-SA8N-SS-0.0-0.5 SL-097-SA8N-SS-0.0-0.5 SL-122-SA8N-SS-0.0-0.5 SL-126-SA5A-SB-4.0-5.0 SL-127-SA5A-SB-2.0-3.0 SL-135-SA8N-SS-0.0-0.5 SL-138-SA8N-SS-0.0-0.5 SL-139-SA8N-SS-0.0-0.5 SL-140-SA8N-SS-0.0-0.5 SL-171-SA5A-SB-2.0-3.0)	CADMIUM COBALT COPPER NICKEL	- - - -	128 127 126 127	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - -	CADMIUM COBALT COPPER NICKEL	J(all detects)

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: **6020**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-138-SA8N-SS-0.0-0.5MS **SL-138-SA8N-SS-0.0-0.5MSD** (DUP04-SA8N-QC-041911 SL-075-SA8N-SS-0.0-0.5 SL-076-SA8N-SS-0.0-0.5 SL-077-SA8N-SS-0.0-0.5 SL-092-SA8N-SS-0.0-0.5 SL-093-SA8N-SS-0.0-0.5 SL-094-SA8N-SS-0.0-0.5 SL-095-SA8N-SS-0.0-0.5 SL-096-SA8N-SS-0.0-0.5 SL-097-SA8N-SS-0.0-0.5 SL-122-SA8N-SS-0.0-0.5 SL-126-SA5A-SB-4.0-5.0 SL-127-SA5A-SB-2.0-3.0 SL-135-SA8N-SS-0.0-0.5 SL-138-SA8N-SS-0.0-0.5 SL-139-SA8N-SS-0.0-0.5 SL-140-SA8N-SS-0.0-0.5 SL-171-SA5A-SB-2.0-3.0)	ANTIMONY ZINC	36 71	44 -	75.00-125.00 75.00-125.00	23 (20.00) -	ANTIMONY ZINC	J(all detects) UJ(all non-detects) Zn, No Qual, >4x
SL-138-SA8N-SS-0.0-0.5MSD (DUP04-SA8N-QC-041911 SL-075-SA8N-SS-0.0-0.5 SL-076-SA8N-SS-0.0-0.5 SL-077-SA8N-SS-0.0-0.5 SL-092-SA8N-SS-0.0-0.5 SL-093-SA8N-SS-0.0-0.5 SL-094-SA8N-SS-0.0-0.5 SL-095-SA8N-SS-0.0-0.5 SL-096-SA8N-SS-0.0-0.5 SL-097-SA8N-SS-0.0-0.5 SL-122-SA8N-SS-0.0-0.5 SL-126-SA5A-SB-4.0-5.0 SL-127-SA5A-SB-2.0-3.0 SL-135-SA8N-SS-0.0-0.5 SL-138-SA8N-SS-0.0-0.5 SL-139-SA8N-SS-0.0-0.5 SL-140-SA8N-SS-0.0-0.5 SL-171-SA5A-SB-2.0-3.0)	BARIUM	-	510	75.00-125.00	32 (20.00)	BARIUM	J(all detects) UJ(all non-detects) No Qual %R, >4x

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-138-SA8N-SS-0.0-0.5MS	ALUMINUM	1033	1129	75.00-125.00	-	ALUMINUM	
SL-138-SA8N-SS-0.0-0.5MSD	CALCIUM	148	162	75.00-125.00	-	CALCIUM	
(DUP04-SA8N-QC-041911	IRON	712	974	75.00-125.00	-	IRON	
SL-075-SA8N-SS-0.0-0.5	MAGNESIUM	142	173	75.00-125.00	-	MAGNESIUM	
SL-076-SA8N-SS-0.0-0.5	TITANIUM	200	238	75.00-125.00	-	TITANIUM	
SL-077-SA8N-SS-0.0-0.5							
SL-092-SA8N-SS-0.0-0.5							
SL-093-SA8N-SS-0.0-0.5							
SL-094-SA8N-SS-0.0-0.5							
SL-095-SA8N-SS-0.0-0.5							
SL-096-SA8N-SS-0.0-0.5							No Qual, >4x
SL-097-SA8N-SS-0.0-0.5							
SL-122-SA8N-SS-0.0-0.5							
SL-126-SA5A-SB-4.0-5.0							
SL-127-SA5A-SB-2.0-3.0							
SL-135-SA8N-SS-0.0-0.5							
SL-138-SA8N-SS-0.0-0.5							
SL-139-SA8N-SS-0.0-0.5							
SL-140-SA8N-SS-0.0-0.5							
SL-171-SA5A-SB-2.0-3.0)							

Method: 1625C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-138-SA8N-SS-0.0-0.5MS SL-138-SA8N-SS-0.0-0.5MSD (SL-138-SA8N-SS-0.0-0.5)	N-NITROSODIMETHYLAMINE	55	56	70.00-130.00	-	N-NITROSODIMETHYLAMINE	J(all detects) UJ(all non-detects)

Method: 300.0
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-075-SA8N-SS-0.0-0.5MS	FLUORIDE	58	-	80.00-120.00	-	FLUORIDE	
(SL-075-SA8N-SS-0.0-0.5							
SL-076-SA8N-SS-0.0-0.5							
SL-077-SA8N-SS-0.0-0.5							
SL-092-SA8N-SS-0.0-0.5							
SL-093-SA8N-SS-0.0-0.5							J(all detects) UJ(all non-detects)
SL-094-SA8N-SS-0.0-0.5							
SL-095-SA8N-SS-0.0-0.5							
SL-096-SA8N-SS-0.0-0.5							
SL-097-SA8N-SS-0.0-0.5							
SL-122-SA8N-SS-0.0-0.5)							
SL-138-SA8N-SS-0.0-0.5MS	FLUORIDE	49	-	80.00-120.00	-	FLUORIDE	
(DUP04-SA8N-QC-041911							
SL-126-SA5A-SB-4.0-5.0							
SL-127-SA5A-SB-2.0-3.0							
SL-135-SA8N-SS-0.0-0.5							J(all detects) UJ(all non-detects)
SL-138-SA8N-SS-0.0-0.5							
SL-139-SA8N-SS-0.0-0.5							
SL-140-SA8N-SS-0.0-0.5							
SL-171-SA5A-SB-2.0-3.0)							

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-138-SA8N-SS-0.0-0.5DUP (DUP04-SA8N-QC-041911 SL-126-SA5A-SB-4.0-5.0 SL-127-SA5A-SB-2.0-3.0 SL-135-SA8N-SS-0.0-0.5 SL-138-SA8N-SS-0.0-0.5 SL-139-SA8N-SS-0.0-0.5 SL-140-SA8N-SS-0.0-0.5 SL-171-SA5A-SB-2.0-3.0)	FLUORIDE	200	20.00	No Qual, OK by Difference

Method: 6010B
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-138-SA8N-SS-0.0-0.5DUP (DUP04-SA8N-QC-041911 SL-075-SA8N-SS-0.0-0.5 SL-076-SA8N-SS-0.0-0.5 SL-077-SA8N-SS-0.0-0.5 SL-092-SA8N-SS-0.0-0.5 SL-093-SA8N-SS-0.0-0.5 SL-094-SA8N-SS-0.0-0.5 SL-095-SA8N-SS-0.0-0.5 SL-096-SA8N-SS-0.0-0.5 SL-097-SA8N-SS-0.0-0.5 SL-122-SA8N-SS-0.0-0.5 SL-126-SA5A-SB-4.0-5.0 SL-127-SA5A-SB-2.0-3.0 SL-135-SA8N-SS-0.0-0.5 SL-138-SA8N-SS-0.0-0.5 SL-139-SA8N-SS-0.0-0.5 SL-140-SA8N-SS-0.0-0.5 SL-171-SA5A-SB-2.0-3.0)	BORON Zirconium	200 27	20.00 20.00	No Qual, OK by Difference

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-138-SA8N-SS-0.0-0.5DUP	ANTIMONY	200	20.00	
(DUP04-SA8N-QC-041911	CADMIUM	24	20.00	
SL-075-SA8N-SS-0.0-0.5	SILVER	30	20.00	
SL-076-SA8N-SS-0.0-0.5				
SL-077-SA8N-SS-0.0-0.5				
SL-092-SA8N-SS-0.0-0.5				
SL-093-SA8N-SS-0.0-0.5				
SL-094-SA8N-SS-0.0-0.5				
SL-095-SA8N-SS-0.0-0.5				No Qual, OK by Difference
SL-096-SA8N-SS-0.0-0.5				
SL-097-SA8N-SS-0.0-0.5				
SL-122-SA8N-SS-0.0-0.5				
SL-126-SA5A-SB-4.0-5.0				
SL-127-SA5A-SB-2.0-3.0				
SL-135-SA8N-SS-0.0-0.5				
SL-138-SA8N-SS-0.0-0.5				
SL-139-SA8N-SS-0.0-0.5				
SL-140-SA8N-SS-0.0-0.5				
SL-171-SA5A-SB-2.0-3.0)				

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-075-SA8N-SS-0.0-0.5DUP	FLUORIDE	74	20.00	
(SL-075-SA8N-SS-0.0-0.5				
SL-076-SA8N-SS-0.0-0.5				
SL-077-SA8N-SS-0.0-0.5				
SL-092-SA8N-SS-0.0-0.5				
SL-093-SA8N-SS-0.0-0.5				No Qual, OK by Difference
SL-094-SA8N-SS-0.0-0.5				
SL-095-SA8N-SS-0.0-0.5				
SL-096-SA8N-SS-0.0-0.5				
SL-097-SA8N-SS-0.0-0.5				
SL-122-SA8N-SS-0.0-0.5)				

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 1625C
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P0WFLCSQ261308 (EB06-SA8N-SS-041911 EB14-SA5A-SB-041911)	N-NITROSODIMETHYLAMINE	60	-	70.00-130.00	-	N-NITROSODIMETHYLAMINE	J (all detects) UJ (all non-detects)

Method: 8082
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11114AQ242158A P11114AY242139A (EB06-SA8N-SS-041911)	Aroclor 5442	92	96	35.00-84.00	-	Aroclor 5432 Aroclor 5442 Aroclor 5460	J(all detects)

Method: 8330A
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11161AY242029A (EB06-SA8N-SS-041911 EB14-SA5A-SB-041911)	2,4,6-TRINITROTOLUENE	-	110	76.00-109.00	-	2,4,6-TRINITROTOLUENE	J(all detects)

Method: 8270C
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P2WJLCSY261109 (EB06-SA8N-SS-041911)	BENZOIC ACID	-	-	10.00-69.00	31 (30.00)	BENZOIC ACID	J(all detects) UJ(all non-detects)

Method: 8260B
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCSY25Q211111A (TB-041911)	CARBON TETRACHLORIDE TRICHLOROFLUOROMETHANE	126 130	- -	75.00-123.00 64.00-129.00	- -	CARBON TETRACHLORIDE TRICHLOROFLUOROMETHAN	J(all detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 8330A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11164AQ240658A (DUP04 -SA8N -QC-041911 SL -075-SA8N -SS-0.0-0.5 SL -076-SA8N -SS-0.0-0.5 SL -077-SA8N -SS-0.0-0.5 SL -092-SA8N -SS-0.0-0.5 SL -093-SA8N -SS-0.0-0.5 SL -122-SA8N -SS-0.0-0.5 SL -135-SA8N -SS-0.0-0.5 SL -138-SA8N -SS-0.0-0.5 SL -139-SA8N -SS-0.0-0.5 SL -140-SA8N -SS-0.0-0.5)	NITROBENZENE PETN	124 124	- -	80.00-120.00 80.00-120.00	- -	NITROBENZENE PETN	J(all detects)

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P5LBLCSQ260936 (DUP04 -SA8N -QC-041911 SL -075-SA8N -SS-0.0-0.5 SL -076-SA8N -SS-0.0-0.5 SL -077-SA8N -SS-0.0-0.5 SL -092-SA8N -SS-0.0-0.5 SL -093-SA8N -SS-0.0-0.5 SL -094-SA8N -SS-0.0-0.5 SL -095-SA8N -SS-0.0-0.5 SL -096-SA8N -SS-0.0-0.5 SL -097-SA8N -SS-0.0-0.5 SL -122-SA8N -SS-0.0-0.5 SL -126-SA5A -SB-4.0-5.0 SL -127-SA5A -SB-2.0-3.0 SL -135-SA8N -SS-0.0-0.5 SL -138-SA8N -SS-0.0-0.5 SL -139-SA8N -SS-0.0-0.5 SL -140-SA8N -SS-0.0-0.5 SL -171-SA5A -SB-2.0-3.0)	4-BROMOPHENYL-PHENYLETH	73	-	79.00-117.00	-	4-BROMOPHENYL-PHENYLET	J(all detects) UJ(all non-detects)

Surrogate Outlier Report

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 1625C
Matrix: AQ

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
EB06-SA8N-SS-041911	N-Nitrosodimethylamine-d6	155	50.00-150.00	All Target Analytes	J (all detects)
EB14-SA5A-SB-041911	N-Nitrosodimethylamine-d6	153	50.00-150.00	All Target Analytes	J(all detects)

Method: 1625C
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-077-SA8N-SS-0.0-0.5	N-Nitrosodimethylamine-d6	255	50.00-150.00	All Target Analytes	No Qual, Diluted Out

Method: 8082
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-076-SA8N-SS-0.0-0.5	DECACHLOROBIPHENYL	128	45.00-120.00	All Target Analytes	No Qual, Diluted Out
SL-138-SA8N-SS-0.0-0.5	DECACHLOROBIPHENYL	121	45.00-120.00	All Target Analytes	J(all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-138-SA8N-SS-0.0-0.5	DUP04-SA8N-QC-041911			
MOISTURE	8.2	8.7	6		No Qualifiers Applied

Method: 1625C
Matrix: SO

Analyte	Concentration (ng/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-138-SA8N-SS-0.0-0.5	DUP04-SA8N-QC-041911			
N-NITROSODIMETHYLAMINE	45.2	43.8	3	50.00	No Qualifiers Applied

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-138-SA8N-SS-0.0-0.5	DUP04-SA8N-QC-041911			
Nitrate-NO3	3.5	3.7	6	50.00	No Qualifiers Applied

Method: 6010B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-138-SA8N-SS-0.0-0.5	DUP04-SA8N-QC-041911			
ALUMINUM	12500	12400	1	50.00	
CALCIUM	2180	2280	4	50.00	
IRON	18600	19400	4	50.00	
LITHIUM	25.5	25.2	1	50.00	
MAGNESIUM	4060	4100	1	50.00	
MANGANESE	309	306	1	50.00	
PHOSPHORUS	431	439	2	50.00	No Qualifiers Applied
POTASSIUM	3530	3580	1	50.00	
SODIUM	69.8	67.8	3	50.00	
STRONTIUM	14.7	15.5	5	50.00	
TIN	2.38	2.28	4	50.00	
TITANIUM	1080	1050	3	50.00	
Zirconium	1.84	1.51	20	50.00	
BORON	1.44	5.42 U	200	50.00	J(all detects) UJ(all non-detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-138-SA8N-SS-0.0-0.5	DUP04-SA8N-QC-041911			
ARSENIC	5.92	6.46	9	50.00	No Qualifiers Applied
BARIUM	116	123	6	50.00	
BERYLLIUM	0.629	0.630	0	50.00	
CADMIUM	0.150	0.224	40	50.00	
CHROMIUM	18.2	19.1	5	50.00	
COBALT	6.90	7.53	9	50.00	
COPPER	10.1	11.7	15	50.00	
LEAD	12.9	13.8	7	50.00	
MOLYBDENUM	0.502	0.591	16	50.00	
NICKEL	13.2	14.1	7	50.00	
SELENIUM	0.122	0.156	24	50.00	
THALLIUM	0.300	0.298	1	50.00	
VANADIUM	37.0	38.9	5	50.00	
ZINC	79.3	85.5	8	50.00	
ANTIMONY	0.218 U	0.123	200	50.00	J(all detects)
SILVER	0.0257	0.0477	60	50.00	UJ(all non-detects)

Method: 7471A
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-138-SA8N-SS-0.0-0.5	DUP04-SA8N-QC-041911			
MERCURY	0.0181	0.0168	7	50.00	No Qualifiers Applied

Method: 8015M
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-138-SA8N-SS-0.0-0.5	DUP04-SA8N-QC-041911			
EFH (C15-C20)	0.85	0.97	13	50.00	No Qualifiers Applied
EFH (C21-C30)	5.8	8.6	39	50.00	
EFH (C30-C40)	22	35	46	50.00	

Method: 8082
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-138-SA8N-SS-0.0-0.5	DUP04-SA8N-QC-041911			
AROCLOR 1254	0.86	0.89	3	50.00	No Qualifiers Applied
AROCLOR 1260	1.2	0.93	25	50.00	
Aroclor 5460	2.2	1.9	15	50.00	

Field Duplicate RPD Report

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-138-SA8N-SS-0.0-0.5	DUP04-SA8N-QC-041911			
BENZO(A)PYRENE	0.77	1.8 U	200	50.00	J(all detects) UJ(all non-detects)
BENZO(B)FLUORANTHENE	1.8	1.8 U	200	50.00	
BENZO(K)FLUORANTHENE	0.86	1.8 U	200	50.00	
CHRYSENE	1.5	0.42	113	50.00	
FLUORANTHENE	1.7	1.8 U	200	50.00	
PHENANTHRENE	0.96	1.8 U	200	50.00	
PYRENE	1.1	1.8 U	200	50.00	

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-138-SA8N-SS-0.0-0.5	DUP04-SA8N-QC-041911			
PH	5.92	6.03	2	50.00	No Qualifiers Applied

Method: ASTM D1498
Matrix: SO

Analyte	Concentration (mV)		Sample RPD	eQAPP RPD	Flag
	SL-138-SA8N-SS-0.0-0.5	DUP04-SA8N-QC-041911			
Oxidation Reduction Potential	449	464	3		No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 1625C

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB14-SA5A-SB-041911	N-NITROSODIMETHYLAMINE	J	0.808	1.06	PQL	ng/L	J (all detects)

Method: 6010B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB06-SA8N-SS-041911	BORON	J	0.0211	0.0500	PQL	mg/L	J (all detects)
	CALCIUM	J	0.0796	0.200	PQL	mg/L	

Method: 6020

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB06-SA8N-SS-041911	COPPER	J	0.00045	0.0020	PQL	mg/L	J (all detects)

Method: 8270C SIM

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB06-SA8N-SS-041911	BIS(2-ETHYLHEXYL)PHTHALATE	J	0.13	1.0	PQL	ug/L	J (all detects)
	Diethylphthalate	J	0.057	1.0	PQL	ug/L	
	Di-n-butylphthalate	J	0.30	1.0	PQL	ug/L	
	Di-n-octylphthalate	J	0.25	1.0	PQL	ug/L	

Method: 8315A

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB06-SA8N-SS-041911	FORMALDEHYDE	J	15	50	PQL	ug/L	J (all detects)

Method: 1625C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-075-SA8N-SS-0.0-0.5	N-NITROSODIMETHYLAMINE	J	303	388	PQL	ng/Kg	J (all detects)
SL-135-SA8N-SS-0.0-0.5	N-NITROSODIMETHYLAMINE	J	27.3	36.5	PQL	ng/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-076-SA8N-SS-0.0-0.5	Nitrate-NO3	J	1.2	1.7	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP04-SA8N-QC-041911	SODIUM	J	67.8	108	PQL	mg/Kg	J (all detects)
	TIN	J	2.28	10.8	PQL	mg/Kg	
	Zirconium	J	1.51	5.42	PQL	mg/Kg	
SL-075-SA8N-SS-0.0-0.5	TIN	J	2.35	11.6	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.10	5.82	PQL	mg/Kg	
SL-076-SA8N-SS-0.0-0.5	BORON	J	1.64	5.57	PQL	mg/Kg	J (all detects)
	TIN	J	2.56	11.1	PQL	mg/Kg	
	Zirconium	J	2.78	5.57	PQL	mg/Kg	
SL-077-SA8N-SS-0.0-0.5	BORON	J	2.67	6.37	PQL	mg/Kg	J (all detects)
	TIN	J	3.00	12.7	PQL	mg/Kg	
	Zirconium	J	3.17	6.37	PQL	mg/Kg	
SL-092-SA8N-SS-0.0-0.5	SODIUM	J	85.5	112	PQL	mg/Kg	J (all detects)
	TIN	J	2.51	11.2	PQL	mg/Kg	
	Zirconium	J	1.80	5.58	PQL	mg/Kg	
SL-093-SA8N-SS-0.0-0.5	BORON	J	1.75	5.60	PQL	mg/Kg	J (all detects)
	SODIUM	J	76.2	112	PQL	mg/Kg	
	TIN	J	2.46	11.2	PQL	mg/Kg	
	Zirconium	J	1.24	5.60	PQL	mg/Kg	
SL-094-SA8N-SS-0.0-0.5	BORON	J	4.41	5.34	PQL	mg/Kg	J (all detects)
	SODIUM	J	84.0	107	PQL	mg/Kg	
	TIN	J	2.56	10.7	PQL	mg/Kg	
	Zirconium	J	3.61	5.34	PQL	mg/Kg	
SL-095-SA8N-SS-0.0-0.5	BORON	J	2.84	5.66	PQL	mg/Kg	J (all detects)
	SODIUM	J	77.9	113	PQL	mg/Kg	
	TIN	J	2.53	11.3	PQL	mg/Kg	
	Zirconium	J	2.88	5.66	PQL	mg/Kg	
SL-096-SA8N-SS-0.0-0.5	BORON	J	4.14	5.27	PQL	mg/Kg	J (all detects)
	SODIUM	J	85.0	105	PQL	mg/Kg	
	TIN	J	2.51	10.5	PQL	mg/Kg	
	Zirconium	J	3.50	5.27	PQL	mg/Kg	
SL-097-SA8N-SS-0.0-0.5	BORON	J	4.55	5.71	PQL	mg/Kg	J (all detects)
	SODIUM	J	94.9	114	PQL	mg/Kg	
	TIN	J	2.55	11.4	PQL	mg/Kg	
	Zirconium	J	3.77	5.71	PQL	mg/Kg	
SL-122-SA8N-SS-0.0-0.5	BORON	J	1.82	5.12	PQL	mg/Kg	J (all detects)
	SODIUM	J	65.8	102	PQL	mg/Kg	
	TIN	J	2.58	10.2	PQL	mg/Kg	
	Zirconium	J	2.53	5.12	PQL	mg/Kg	
SL-126-SA5A-SB-4.0-5.0	SODIUM	J	113	115	PQL	mg/Kg	J (all detects)
	TIN	J	3.04	11.5	PQL	mg/Kg	
	Zirconium	J	1.94	5.76	PQL	mg/Kg	
SL-127-SA5A-SB-2.0-3.0	SODIUM	J	62.0	110	PQL	mg/Kg	J (all detects)
	TIN	J	2.41	11.0	PQL	mg/Kg	
	Zirconium	J	1.22	5.51	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-135-SA8N-SS-0.0-0.5	BORON	J	1.54	5.31	PQL	mg/Kg	J (all detects)
	SODIUM	J	65.0	106	PQL	mg/Kg	
	TIN	J	2.31	10.6	PQL	mg/Kg	
	Zirconium	J	1.61	5.31	PQL	mg/Kg	
SL-138-SA8N-SS-0.0-0.5	BORON	J	1.44	5.39	PQL	mg/Kg	J (all detects)
	SODIUM	J	69.8	108	PQL	mg/Kg	
	TIN	J	2.38	10.8	PQL	mg/Kg	
	Zirconium	J	1.84	5.39	PQL	mg/Kg	
SL-139-SA8N-SS-0.0-0.5	SODIUM	J	70.2	103	PQL	mg/Kg	J (all detects)
	TIN	J	2.39	10.3	PQL	mg/Kg	
	Zirconium	J	1.50	5.14	PQL	mg/Kg	
SL-140-SA8N-SS-0.0-0.5	BORON	J	1.12	5.55	PQL	mg/Kg	J (all detects)
	SODIUM	J	77.7	111	PQL	mg/Kg	
	TIN	J	2.54	11.1	PQL	mg/Kg	
	Zirconium	J	2.13	5.55	PQL	mg/Kg	
SL-171-SA5A-SB-2.0-3.0	SODIUM	J	81.5	118	PQL	mg/Kg	J (all detects)
	TIN	J	2.52	11.8	PQL	mg/Kg	
	Zirconium	J	1.03	5.91	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP04-SA8N-QC-041911	ANTIMONY	J	0.123	0.215	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.156	0.430	PQL	mg/Kg	
	SILVER	J	0.0477	0.107	PQL	mg/Kg	
SL-075-SA8N-SS-0.0-0.5	ANTIMONY	J	0.0702	0.231	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.315	0.461	PQL	mg/Kg	
	SILVER	J	0.0324	0.115	PQL	mg/Kg	
SL-076-SA8N-SS-0.0-0.5	ANTIMONY	J	0.128	0.225	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.250	0.450	PQL	mg/Kg	
	SILVER	J	0.0497	0.112	PQL	mg/Kg	
SL-077-SA8N-SS-0.0-0.5	SELENIUM	J	0.490	0.500	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0695	0.125	PQL	mg/Kg	
SL-092-SA8N-SS-0.0-0.5	ANTIMONY	J	0.127	0.213	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.174	0.425	PQL	mg/Kg	
	SILVER	J	0.0490	0.106	PQL	mg/Kg	
SL-093-SA8N-SS-0.0-0.5	ANTIMONY	J	0.0947	0.224	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.223	0.448	PQL	mg/Kg	
SL-094-SA8N-SS-0.0-0.5	ANTIMONY	J	0.144	0.209	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.202	0.419	PQL	mg/Kg	
	SILVER	J	0.0569	0.105	PQL	mg/Kg	
SL-095-SA8N-SS-0.0-0.5	ANTIMONY	J	0.0666	0.220	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.153	0.439	PQL	mg/Kg	
	SILVER	J	0.0523	0.110	PQL	mg/Kg	
SL-096-SA8N-SS-0.0-0.5	ANTIMONY	J	0.119	0.211	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.150	0.421	PQL	mg/Kg	
	SILVER	J	0.0370	0.105	PQL	mg/Kg	
SL-097-SA8N-SS-0.0-0.5	SELENIUM	J	0.177	0.444	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0580	0.111	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-122-SA8N-SS-0.0-0.5	ANTIMONY	J	0.0862	0.205	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.147	0.410	PQL	mg/Kg	
	SILVER	J	0.0520	0.102	PQL	mg/Kg	
SL-126-SA5A-SB-4.0-5.0	ANTIMONY	J	0.0699	0.228	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.0612	0.114	PQL	mg/Kg	
	SELENIUM	J	0.0674	0.456	PQL	mg/Kg	
	SILVER	J	0.0569	0.114	PQL	mg/Kg	
SL-127-SA5A-SB-2.0-3.0	ANTIMONY	J	0.0804	0.220	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.133	0.441	PQL	mg/Kg	
	SILVER	J	0.0420	0.110	PQL	mg/Kg	
SL-135-SA8N-SS-0.0-0.5	ANTIMONY	J	0.0727	0.217	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.184	0.433	PQL	mg/Kg	
	SILVER	J	0.0146	0.108	PQL	mg/Kg	
SL-138-SA8N-SS-0.0-0.5	SELENIUM	J	0.122	0.436	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0257	0.109	PQL	mg/Kg	
SL-139-SA8N-SS-0.0-0.5	SELENIUM	J	0.106	0.411	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0434	0.103	PQL	mg/Kg	
SL-140-SA8N-SS-0.0-0.5	SELENIUM	J	0.204	0.444	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0531	0.111	PQL	mg/Kg	
SL-171-SA5A-SB-2.0-3.0	ANTIMONY	J	0.101	0.230	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.182	0.460	PQL	mg/Kg	
	SILVER	J	0.0596	0.115	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-075-SA8N-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.50	1.2	PQL	mg/Kg	J (all detects)
SL-076-SA8N-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.50	1.1	PQL	mg/Kg	J (all detects)
SL-094-SA8N-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.67	1.1	PQL	mg/Kg	J (all detects)
SL-126-SA5A-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.54	1.2	PQL	mg/Kg	J (all detects)
SL-140-SA8N-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.49	1.1	PQL	mg/Kg	J (all detects)
SL-171-SA5A-SB-2.0-3.0	HEXAVALENT CHROMIUM	J	0.50	1.2	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP04-SA8N-QC-041911	MERCURY	J	0.0168	0.105	PQL	mg/Kg	J (all detects)
SL-075-SA8N-SS-0.0-0.5	MERCURY	J	0.0139	0.116	PQL	mg/Kg	J (all detects)
SL-076-SA8N-SS-0.0-0.5	MERCURY	J	0.0303	0.106	PQL	mg/Kg	J (all detects)
SL-077-SA8N-SS-0.0-0.5	MERCURY	J	0.0977	0.124	PQL	mg/Kg	J (all detects)
SL-094-SA8N-SS-0.0-0.5	MERCURY	J	0.0323	0.104	PQL	mg/Kg	J (all detects)
SL-095-SA8N-SS-0.0-0.5	MERCURY	J	0.0151	0.109	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-096-SA8N-SS-0.0-0.5	MERCURY	J	0.0149	0.101	PQL	mg/Kg	J (all detects)
SL-097-SA8N-SS-0.0-0.5	MERCURY	J	0.0149	0.109	PQL	mg/Kg	J (all detects)
SL-122-SA8N-SS-0.0-0.5	MERCURY	J	0.0209	0.101	PQL	mg/Kg	J (all detects)
SL-126-SA5A-SB-4.0-5.0	MERCURY	J	0.0188	0.110	PQL	mg/Kg	J (all detects)
SL-127-SA5A-SB-2.0-3.0	MERCURY	J	0.0035	0.106	PQL	mg/Kg	J (all detects)
SL-135-SA8N-SS-0.0-0.5	MERCURY	J	0.0158	0.102	PQL	mg/Kg	J (all detects)
SL-138-SA8N-SS-0.0-0.5	MERCURY	J	0.0181	0.102	PQL	mg/Kg	J (all detects)
SL-139-SA8N-SS-0.0-0.5	MERCURY	J	0.0089	0.0973	PQL	mg/Kg	J (all detects)
SL-140-SA8N-SS-0.0-0.5	MERCURY	J	0.0268	0.107	PQL	mg/Kg	J (all detects)
SL-171-SA5A-SB-2.0-3.0	MERCURY	J	0.0103	0.114	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP04-SA8N-QC-041911	EFH (C15-C20)	J	0.97	1.3	PQL	mg/Kg	J (all detects)
SL-077-SA8N-SS-0.0-0.5	EFH (C15-C20)	J	0.99	1.5	PQL	mg/Kg	J (all detects)
SL-122-SA8N-SS-0.0-0.5	EFH (C15-C20)	J	0.97	1.2	PQL	mg/Kg	J (all detects)
SL-138-SA8N-SS-0.0-0.5	EFH (C15-C20)	J	0.85	1.3	PQL	mg/Kg	J (all detects)
SL-140-SA8N-SS-0.0-0.5	EFH (C15-C20)	J	2.6	2.7	PQL	mg/Kg	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP04-SA8N-QC-041911	AROCLOR 1254 AROCLOR 1260 Aroclor 5460	J J J	0.89 0.93 1.9	1.9 1.9 3.6	PQL PQL PQL	ug/Kg ug/Kg ug/Kg	J (all detects)
SL-075-SA8N-SS-0.0-0.5	AROCLOR 1254	J	1.2	2.0	PQL	ug/Kg	J (all detects)
SL-076-SA8N-SS-0.0-0.5	Aroclor 5460	J	7.5	18	PQL	ug/Kg	J (all detects)
SL-092-SA8N-SS-0.0-0.5	AROCLOR 1254 Aroclor 5460	J J	1.2 1.4	1.9 3.7	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-093-SA8N-SS-0.0-0.5	AROCLOR 1260 Aroclor 5460	J J	6.9 7.6	9.7 19	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-094-SA8N-SS-0.0-0.5	AROCLOR 1254 AROCLOR 1260 Aroclor 5460	J J J	1.1 0.79 2.7	1.8 1.8 3.6	PQL PQL PQL	ug/Kg ug/Kg ug/Kg	J (all detects)
SL-096-SA8N-SS-0.0-0.5	AROCLOR 1260	J	0.65	1.8	PQL	ug/Kg	J (all detects)
SL-122-SA8N-SS-0.0-0.5	AROCLOR 1254 AROCLOR 1260 Aroclor 5460	J J J	0.70 1.0 2.3	1.8 1.8 3.4	PQL PQL PQL	ug/Kg ug/Kg ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-135-SA8N-SS-0.0-0.5	AROCLOR 1260 Aroclor 5460	J J	1.2 1.6	1.8 3.6	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-138-SA8N-SS-0.0-0.5	AROCLOR 1254 AROCLOR 1260 Aroclor 5460	J J J	0.86 1.2 2.2	1.8 1.8 3.6	PQL PQL PQL	ug/Kg ug/Kg ug/Kg	J (all detects)
SL-139-SA8N-SS-0.0-0.5	AROCLOR 1254 AROCLOR 1260 Aroclor 5460	J J J	0.75 0.68 1.7	1.8 1.8 3.5	PQL PQL PQL	ug/Kg ug/Kg ug/Kg	J (all detects)
SL-140-SA8N-SS-0.0-0.5	AROCLOR 1254 AROCLOR 1260 Aroclor 5460	J J J	1.5 1.7 2.5	1.9 1.9 3.8	PQL PQL PQL	ug/Kg ug/Kg ug/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-126-SA5A-SB-4.0-5.0	METHYLENE CHLORIDE	J	0.67	4.0	PQL	ug/Kg	J (all detects)
SL-127-SA5A-SB-2.0-3.0	METHYLENE CHLORIDE	J	0.75	4.2	PQL	ug/Kg	J (all detects)
SL-171-SA5A-SB-2.0-3.0	METHYLENE CHLORIDE	J	0.65	3.9	PQL	ug/Kg	J (all detects)

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-077-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	43	420	PQL	ug/Kg	J (all detects)
SL-092-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	27	370	PQL	ug/Kg	J (all detects)
SL-093-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	32	380	PQL	ug/Kg	J (all detects)
SL-094-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	27	360	PQL	ug/Kg	J (all detects)
SL-096-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	24	360	PQL	ug/Kg	J (all detects)
SL-097-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	25	380	PQL	ug/Kg	J (all detects)
SL-122-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	27	340	PQL	ug/Kg	J (all detects)
SL-126-SA5A-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	34	380	PQL	ug/Kg	J (all detects)
SL-135-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	20	360	PQL	ug/Kg	J (all detects)
SL-138-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	24	360	PQL	ug/Kg	J (all detects)
SL-139-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	27	340	PQL	ug/Kg	J (all detects)
SL-140-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	28	380	PQL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP04-SA8N-QC-041911	CHRYSENE	J	0.42	1.8	PQL	ug/Kg	J (all detects)
SL-077-SA8N-SS-0.0-0.5	BENZO(A)PYRENE	J	1.2	2.1	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	1.9	2.1	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	0.89	2.1	PQL	ug/Kg	
	Di-n-octylphthalate	J	10	23	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.2	2.1	PQL	ug/Kg	
	NAPHTHALENE	J	1.3	2.1	PQL	ug/Kg	
	PHENANTHRENE	J	2.0	2.1	PQL	ug/Kg	
	PYRENE	J	1.9	2.1	PQL	ug/Kg	
SL-092-SA8N-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	1.6	1.9	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	1.1	1.9	PQL	ug/Kg	
	CHRYSENE	J	1.6	1.9	PQL	ug/Kg	
	FLUORANTHENE	J	1.6	1.9	PQL	ug/Kg	
	FLUORENE	J	1.7	1.9	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	0.81	1.9	PQL	ug/Kg	
	PHENANTHRENE	J	1.2	1.9	PQL	ug/Kg	
	PYRENE	J	1.0	1.9	PQL	ug/Kg	
SL-093-SA8N-SS-0.0-0.5	BENZO(A)PYRENE	J	0.93	1.9	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	1.4	1.9	PQL	ug/Kg	
	FLUORANTHENE	J	1.6	1.9	PQL	ug/Kg	
	FLUORENE	J	1.8	1.9	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.2	1.9	PQL	ug/Kg	
	PHENANTHRENE	J	1.0	1.9	PQL	ug/Kg	
	PYRENE	J	1.2	1.9	PQL	ug/Kg	
SL-095-SA8N-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	1.3	1.9	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	0.87	1.9	PQL	ug/Kg	
	CHRYSENE	J	1.1	1.9	PQL	ug/Kg	
	FLUORANTHENE	J	1.5	1.9	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.0	1.9	PQL	ug/Kg	
	PHENANTHRENE	J	0.89	1.9	PQL	ug/Kg	
	PYRENE	J	0.98	1.9	PQL	ug/Kg	
SL-096-SA8N-SS-0.0-0.5	ANTHRACENE	J	0.49	1.8	PQL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	1.1	1.8	PQL	ug/Kg	
	CHRYSENE	J	0.86	1.8	PQL	ug/Kg	
	FLUORANTHENE	J	1.3	1.8	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	0.84	1.8	PQL	ug/Kg	
	PHENANTHRENE	J	1.0	1.8	PQL	ug/Kg	
	PYRENE	J	0.89	1.8	PQL	ug/Kg	
SL-097-SA8N-SS-0.0-0.5	2-METHYLNAPHTHALENE	J	0.92	1.9	PQL	ug/Kg	J (all detects)
	ANTHRACENE	J	0.88	1.9	PQL	ug/Kg	
	BENZO(A)ANTHRACENE	J	1.1	1.9	PQL	ug/Kg	
	BENZO(A)PYRENE	J	1.2	1.9	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	1.2	1.9	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	0.95	1.9	PQL	ug/Kg	
	NAPHTHALENE	J	1.6	1.9	PQL	ug/Kg	
SL-122-SA8N-SS-0.0-0.5	BENZO(A)PYRENE	J	0.85	1.7	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	1.2	1.7	PQL	ug/Kg	
	CHRYSENE	J	1.4	1.7	PQL	ug/Kg	
	FLUORANTHENE	J	1.6	1.7	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.1	1.7	PQL	ug/Kg	
	PHENANTHRENE	J	0.86	1.7	PQL	ug/Kg	
	PYRENE	J	1.2	1.7	PQL	ug/Kg	
SL-127-SA5A-SB-2.0-3.0	CHRYSENE	J	0.71	1.9	PQL	ug/Kg	J (all detects)
	FLUORANTHENE	J	1.6	1.9	PQL	ug/Kg	
	PYRENE	J	1.2	1.9	PQL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE131 **Laboratory: LL**

EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: **8270C SIM**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-138-SA8N-SS-0.0-0.5	BENZO(A)PYRENE	J	0.77	1.8	PQL	ug/Kg	J (all detects)
	BENZO(K)FLUORANTHENE	J	0.86	1.8	PQL	ug/Kg	
	CHRYSENE	J	1.5	1.8	PQL	ug/Kg	
	FLUORANTHENE	J	1.7	1.8	PQL	ug/Kg	
	PHENANTHRENE	J	0.96	1.8	PQL	ug/Kg	
	PYRENE	J	1.1	1.8	PQL	ug/Kg	
SL-139-SA8N-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	0.96	1.7	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	0.84	1.7	PQL	ug/Kg	
	FLUORANTHENE	J	1.0	1.7	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	0.88	1.7	PQL	ug/Kg	
SL-140-SA8N-SS-0.0-0.5	BENZO(A)PYRENE	J	1.0	1.9	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	1.3	1.9	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.1	1.9	PQL	ug/Kg	
	PHENANTHRENE	J	1.1	1.9	PQL	ug/Kg	
	PYRENE	J	1.5	1.9	PQL	ug/Kg	

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: DE131 **Laboratory: LL**
EDD Filename: DE131_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 8015M **Preparation Method: 3510C**
Matrix: AQ

Sample ID	*Type*	*Actual*	*Criteria*	*Units*	*Flag*
EB06-SA8N-SS-041911 (REA2)	Sampling To Analysis	10.00	7.00	DAYS	J (all detects)
EB14-SA5A-SB-041911 (REA2)		10.00	7.00	DAYS	UJ (all non-detects)
EB14-SA5A-SB-041911 (RES)		8.00	7.00	DAYS	

LDC #: 26078C4 **VALIDATION COMPLETENESS WORKSHEET** Date: 8/29-11

SDG #: DE131 ADR Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: OC

2nd Reviewer: C

METHOD: Metals (EPA SW 846 Method 6010B/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates:
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	SW	MS/D
VII.	Duplicate Sample Analysis	SW	D
VIII.	Laboratory Control Samples (LCS)	N	LCS/D
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	(Ba, Ni)
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	SW	EB= 19

Note: A = Acceptable ND = No compounds detected D = Duplicate
N = Not provided/applicable R = Rinsate TB = Trip blank
SW = See worksheet FB = Field blank EB = Equipment blank

Validated Samples:

1	SL-075-SA8N-SS-0.0-0.5	11	SL-135-SA8N-SS-0.0-0.5	21	SL-138-SA8N-SS-0.0-0.5MSD	31	
2	SL-076-SA8N-SS-0.0-0.5	12	SL-138-SA8N-SS-0.0-0.5	22	SL-138-SA8N-SS-0.0-0.5DUP	32	
3	SL-077-SA8N-SS-0.0-0.5	13	SL-139-SA8N-SS-0.0-0.5	23		33	
4	SL-092-SA8N-SS-0.0-0.5	14	SL-140-SA8N-SS-0.0-0.5	24		34	
5	SL-093-SA8N-SS-0.0-0.5	15	SL-DUP04-SA8N-QC-041911	25		35	
6	SL-094-SA8N-SS-0.0-0.5	16	SL-171-SA5A-SB-2.0-3.0	26		36	
7	SL-095-SA8N-SS-0.0-0.5	17	SL-126-SA5A-SB-4.0-5.0	27		37	
8	SL-096-SA8N-SS-0.0-0.5	18	SL-127-SA5A-SB-2.0-3.0	28		38	
9	SL-097-SA8N-SS-0.0-0.5	19	EB06-SA8N-SS-041911 W	29		39	
10	SL-122-SA8N-SS-0.0-0.5	20	SL-138-SA8N-SS-0.0-0.5MS	30		40	

Notes: _____

LDC #: 26078C4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Reviewer: CR
2nd Reviewer: CR

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000) Soil preparation factor applied: 100x x MS: 2xdil Reason: B
Sample Concentration units, unless otherwise noted: ug/L Associated Samples: All Water

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	19									
Cu			0.24	1.2	0.45									

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".
Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC #: 26078C4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: CZ
2nd Reviewer: SM

METHOD: Trace Metals (EPA SW846 6010B/7000)

Y N N/A Were field blanks identified in this SDG?

Y N N/A Were target analytes detected in the field blanks?

Blank units: ug/L **Associated sample units:** mg/Kg

Sampling date: 4/19/11 Soil factor applied 100x 1-15

Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: ~~All Soil~~ Reason Code: F

Analyte	Blank ID	Sample Identification																		
	8 19	Action Level	1.	2.	3.	5.	6.	7.	8.	9.	10.	11.	12.	14.						
B	21.1	10.55	7.5	1.6	2.7	1.7	4.4	2.8	4.1	4.6	1.8	1.5	1.4	1.1						
Ca	79.6	39.8																		
Cu	0.45	0.225																		

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Samples with analyte concentrations within five times the associated field blank concentration are listed above, these sample results were qualified as not detected, "U".

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: DE131
Matrix: SOIL Level (low/med): LOW

74X

Background Lab Sample ID: 6262830BKG Matrix Spike Lab Sample ID: 6262831MS Matrix Spike Duplicate Lab Sample ID: 6262832MSD
% Solids for Sample: 91.8
Batch Id(s): P11608B, P11626B, P11611B

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	Control Limit RPD	M
Aluminum		12489.1844		14695.8264		14877.5314		213.5931	211.5193	MG/KG	1033		1129		1			20	P
Antimony	121	0.0654	U	0.4505		0.5695		1.2691	1.2942	MG/KG	35	N	44	N	23	*	75 - 125	20	MS
Arsenic	75	5.9194		8.1329		8.3738		2.1152	2.1571	MG/KG	105		114		3		75 - 125	20	MS
Barium	137	116.2745		124.3945		171.2720		10.5760	10.7854	MG/KG	77		510		32	*		20	MS
Beryllium	9	0.6285		1.5824		1.6538		0.8461	0.8628	MG/KG	113		119		4		75 - 125	20	MS
Boron		1.4420	B	212.3350		210.2671		213.5931	211.5193	MG/KG	99		99		1		84 - 115	20	P
Cadmium	111	0.1499		1.3654		1.5304		1.0576	1.0785	MG/KG	115		128	N	11		75 - 125	20	MS
Calcium		2180.5334		2810.9328		2864.6022		427.1861	423.0387	MG/KG	148		162		2			20	P
Chromium	52	18.1939		29.6339		29.5304		10.5760	10.7854	MG/KG	108		105		0		75 - 125	20	MS
Cobalt	59	6.9020		71.9166		75.4330		52.8798	53.9270	MG/KG	123		127	N	5		75 - 125	20	MS
Copper	63	10.1460		22.4634		23.7710		10.5760	10.7854	MG/KG	116		126	N	6		75 - 125	20	MS
Iron		18649.2224		19409.5124		19679.0300		106.7965	105.7597	MG/KG	712		974		1			20	P
Lead	208	12.8715		15.7899		16.1781		3.1728	3.2356	MG/KG	92		102		2			20	MS
Lithium		25.5333		130.8033		130.8596		106.7965	105.7597	MG/KG	99		100		0		82 - 114	20	P
Magnesium		4061.7841		4365.5015		4427.8497		213.5931	211.5193	MG/KG	142		173		1			20	P
Manganese		309.0080		363.8750		367.0982		53.3983	52.8798	MG/KG	103		110		1			20	P
Mercury		0.0181	B	0.1810		0.1749		0.1741	0.1714	MG/KG	94		91		3		65 - 135	20	CV
Molybdenum	98	0.5024		12.5494		13.2358		10.5760	10.7854	MG/KG	114		118		5		75 - 125	20	MS
Nickel	60	13.1939		25.3612		26.9419		10.5760	10.7854	MG/KG	115		127	N	6		75 - 125	20	MS
Phosphorus		431.4437		523.4568		521.3783		106.7965	105.7597	MG/KG	86		85		0			20	P
Potassium		3533.9352		4764.0640		4806.7718		1067.9653	1057.5967	MG/KG	115		120		1		75 - 125	20	P
Selenium	78	0.1224	B	2.5150		2.5756		2.1152	2.1571	MG/KG	113		114		2		75 - 125	20	MS
Silver	107	0.0257	B	13.0804		13.5421		10.5760	10.7854	MG/KG	123		125		3		75 - 125	20	MS
Sodium		69.8138	B	1142.4570		1140.2585		1067.9653	1057.5967	MG/KG	100		101		0		75 - 125	20	P
Strontium		14.7070		124.1616		122.4528		106.7965	105.7597	MG/KG	102		102		1		75 - 115	20	P
Thallium	203	0.2998		0.7712		0.7828		0.4230	0.4314	MG/KG	111		112		1		75 - 125	20	MS
Tin		2.3825	B	371.5473		370.1853		427.1861	423.0387	MG/KG	86		87		0		80 - 110	20	P
Titanium		1081.6282		1294.7221		1333.5787		106.7965	105.7597	MG/KG	200		238		3			20	P
Vanadium	51	36.9717		46.7669		47.9734		10.5760	10.7854	MG/KG	93		102		3		75 - 125	20	MS
Zinc	66	79.3246		86.8287		89.2815		10.5760	10.7854	MG/KG	71		92		3			20	MS
Zirconium		1.8368	B	98.4803		98.4453		106.7965	105.7597	MG/KG	90		91		0		75 - 125	20	P

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: DE131
Matrix: SOIL Level (low/med): LOW

<5xRL

Background Lab Sample ID: 6262830BKG
% Solids for Duplicate: 91.7
Batch ID(s): P11608B, P11626B, P11611B
Concentration Units: MG/KG

Duplicate Lab Sample ID: 6262833DUP
% Solids for Sample: 91.8

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			12489.1844		12618.1737		1		P
Antimony	121		0.0654	U	0.0727	B	200		MS
Arsenic	75		5.9194		6.0789		3		MS
Barium	137		116.2745		100.0683		15		MS
Beryllium	9	0.1	0.6285		0.5410		15		MS
Boron			1.4420	B	0.9413	U	200		P
Cadmium	111	0.1	0.1499		0.1905		24		MS
Calcium			2180.5334		2129.1241		2		P
Chromium	52		18.1939		16.2224		11		MS
Cobalt	59		6.9020		5.8418		17		MS
Copper	63		10.1460		8.9218		13		MS
Iron			18649.2224		18991.6207		2		P
Lead	208		12.8715		11.5511		11		MS
Lithium			25.5333		25.6235		0		P
Magnesium			4061.7841		4049.4627		0		P
Manganese			309.0080		312.1391		1		P
Mercury			0.0181	B	0.0192	B	6		CV
Molybdenum	98	0.1	0.5024		0.5133		2		MS
Nickel	60		13.1939		11.3610		15		MS
Phosphorus			431.4437		423.2925		2		P
Potassium			3533.9352		3496.8462		1		P
Selenium	78		0.1224	B	0.1265	B	3		MS
Silver	107		0.0257	B	0.0348	B	30		MS
Sodium			69.8138	B	67.3795	B	4		P
Strontium			14.7070		14.3146		3		P
Thallium	203	0.1	0.2998		0.3101		3		MS
Tin			2.3825	B	2.5319	B	6		P
Titanium			1081.6282		1050.8355		3		P
Vanadium	51		36.9717		33.0215		11		MS
Zinc	66		79.3246		68.7342		14		MS
Zirconium			1.8368	B	2.4060	B	27		P

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

DE131 5824

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
* = Duplicate Out of Spec

Lancaster Laboratories

5105A

QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: DE131
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6262830BKG Serial Dilution Lab Sample ID: 6262830L
Batch ID(s): P11608B, P11626B
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		115797.2200		118967.9500		3		P
Antimony	121	0.3000	U	1.5000	U			MS
Arsenic	75	27.1700		23.0850		15		MS
Barium	137	533.7000		442.7000		17	E	MS
Beryllium	9	2.8850		2.7295		5		MS
Boron		13.3700	B	44.5000	U	100		P
Cadmium	111	0.6881		1.1800	B	71		MS
Calcium		20217.4700		21961.7000		9		P
Chromium	52	83.5100		78.1500		6		MS
Cobalt	59	31.6800		30.7350		3		MS
Copper	63	46.5700		44.2200		5		MS
Iron		172911.8600		189954.8000		10		P
Lead	208	59.0800		55.5500		6		MS
Lithium		236.7400		239.4000		1		P
Magnesium		37660.0500		40600.5500		8		P
Manganese		2865.0600		3128.2000		9		P
Molybdenum	98	2.3060		2.2785	B	1		MS
Nickel	60	60.5600		53.2000		12	E	MS
Phosphorus		4000.2600		4162.1000		4		P
Potassium		32765.9400		34613.0000		6		P
Selenium	78	0.5619	B	1.0000	U	100		MS
Silver	107	0.1181	B	0.3000	U	100		MS
Sodium		647.3000	B	1865.0000	U	100		P
Strontium		136.3600		146.5000		7		P
Thallium	203	1.3760		1.3165	B	4		MS
Tin		22.0900	B	50.0000	U	100		P
Titanium		10028.6400		10649.7500		6		P
Vanadium	51	169.7000		160.8500		5		MS
Zinc	66	364.1000		362.3500		0		MS
Zirconium		17.0300	B	42.0000	U	100		P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS: PE131 5638
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

SAMPLE DELIVERY GROUP

DE132

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
20-Apr-2011	SL-129-SA8N-SS-0.0-0.5	6264825	N	3050B	6010B	III
20-Apr-2011	SL-129-SA8N-SS-0.0-0.5	6264825	N	3050B	6020	III
20-Apr-2011	SL-129-SA8N-SS-0.0-0.5	6264825	N	3060A	7199	III
20-Apr-2011	SL-129-SA8N-SS-0.0-0.5	6264825	N	3550B	8015M	III
20-Apr-2011	SL-129-SA8N-SS-0.0-0.5	6264825	N	3550B	8082	III
20-Apr-2011	SL-129-SA8N-SS-0.0-0.5	6264825	N	3550B	8270C	III
20-Apr-2011	SL-129-SA8N-SS-0.0-0.5	6264825	N	3550B	8270C SIM	III
20-Apr-2011	SL-129-SA8N-SS-0.0-0.5	6264825	N	METHOD	300.0	III
20-Apr-2011	SL-129-SA8N-SS-0.0-0.5	6264825	N	METHOD	314.0	III
20-Apr-2011	SL-129-SA8N-SS-0.0-0.5	6264825	N	METHOD	7471A	III
20-Apr-2011	SL-128-SA8N-SS-0.0-0.5	6264824	N	3050B	6010B	III
20-Apr-2011	SL-128-SA8N-SS-0.0-0.5	6264824	N	3050B	6020	III
20-Apr-2011	SL-128-SA8N-SS-0.0-0.5	6264824	N	3060A	7199	III
20-Apr-2011	SL-128-SA8N-SS-0.0-0.5	6264824	N	3550B	8015M	III
20-Apr-2011	SL-128-SA8N-SS-0.0-0.5	6264824	N	3550B	8082	III
20-Apr-2011	SL-128-SA8N-SS-0.0-0.5	6264824	N	3550B	8270C	III
20-Apr-2011	SL-128-SA8N-SS-0.0-0.5	6264824	N	3550B	8270C SIM	III
20-Apr-2011	SL-128-SA8N-SS-0.0-0.5	6264824	N	METHOD	300.0	III
20-Apr-2011	SL-128-SA8N-SS-0.0-0.5	6264824	N	METHOD	314.0	III
20-Apr-2011	SL-128-SA8N-SS-0.0-0.5	6264824	N	METHOD	7471A	III
20-Apr-2011	SL-127-SA8N-SS-0.0-0.5	6264823	N	3050B	6010B	III
20-Apr-2011	SL-127-SA8N-SS-0.0-0.5	6264823	N	3050B	6020	III
20-Apr-2011	SL-127-SA8N-SS-0.0-0.5	6264823	N	3060A	7199	III
20-Apr-2011	SL-127-SA8N-SS-0.0-0.5	6264823	N	3550B	8015M	III
20-Apr-2011	SL-127-SA8N-SS-0.0-0.5	6264823	N	3550B	8082	III
20-Apr-2011	SL-127-SA8N-SS-0.0-0.5	6264823	N	3550B	8270C	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
20-Apr-2011	SL-127-SA8N-SS-0.0-0.5	6264823	N	3550B	8270C SIM	III
20-Apr-2011	SL-127-SA8N-SS-0.0-0.5	6264823	N	METHOD	300.0	III
20-Apr-2011	SL-127-SA8N-SS-0.0-0.5	6264823	N	METHOD	314.0	III
20-Apr-2011	SL-127-SA8N-SS-0.0-0.5	6264823	N	METHOD	7471A	III
20-Apr-2011	SL-136-SA8N-SS-0.0-0.5	6264826	N	3050B	6010B	III
20-Apr-2011	SL-136-SA8N-SS-0.0-0.5	6264826	N	3050B	6020	III
20-Apr-2011	SL-136-SA8N-SS-0.0-0.5	6264826	N	3060A	7199	III
20-Apr-2011	SL-136-SA8N-SS-0.0-0.5	6264826	N	3550B	8082	III
20-Apr-2011	SL-136-SA8N-SS-0.0-0.5	6264826	N	3550B	8270C	III
20-Apr-2011	SL-136-SA8N-SS-0.0-0.5	6264826	N	3550B	8270C SIM	III
20-Apr-2011	SL-136-SA8N-SS-0.0-0.5	6264826	N	METHOD	300.0	III
20-Apr-2011	SL-136-SA8N-SS-0.0-0.5	6264826	N	METHOD	314.0	III
20-Apr-2011	SL-136-SA8N-SS-0.0-0.5	6264826	N	METHOD	7471A	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5	6264819	N	3050B	6010B	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5	6264819	N	3050B	6020	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5	6264819	N	3060A	7199	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5	6264819	N	3546	1625C	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5	6264819	N	3550B	8015B	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5	6264819	N	3550B	8015M	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5	6264819	N	3550B	8082	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5	6264819	N	3550B	8270C	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5	6264819	N	3550B	8270C SIM	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5	6264819	N	8330	8330A	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5	6264819	N	METHOD	300.0	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5	6264819	N	METHOD	314.0	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5	6264819	N	METHOD	7471A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5	6264819	N	METHOD	8015B	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5	6264819	N	METHOD	8015M	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5	6264819	N	METHOD	8315A	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5	6264819	N	METHOD	9012B	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MS	6264820	MS	3050B	6010B	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MS	6264820	MS	3050B	6020	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MS	6264820	MS	3060A	7199	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MS	6264820	MS	3546	1625C	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MS	6264820	MS	3550B	8015B	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MS	6264820	MS	3550B	8015M	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MS	6264820	MS	3550B	8082	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MS	6264820	MS	3550B	8270C	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MS	6264820	MS	3550B	8270C SIM	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MS	6264820	MS	8330	8330A	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MS	6264820	MS	METHOD	300.0	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MS	6264820	MS	METHOD	314.0	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MS	6264820	MS	METHOD	7471A	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MS	6264820	MS	METHOD	8015B	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MS	6264820	MS	METHOD	8015M	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MS	6264820	MS	METHOD	8315A	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MS	6264820	MS	METHOD	9012B	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MSD	6264821	MSD	3050B	6010B	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MSD	6264821	MSD	3050B	6020	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MSD	6264821	MSD	3546	1625C	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MSD	6264821	MSD	3550B	8015B	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MSD	6264821	MSD	3550B	8015M	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MSD	6264821	MSD	3550B	8082	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MSD	6264821	MSD	3550B	8270C	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MSD	6264821	MSD	3550B	8270C SIM	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MSD	6264821	MSD	8330	8330A	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MSD	6264821	MSD	METHOD	7471A	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MSD	6264821	MSD	METHOD	8015B	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MSD	6264821	MSD	METHOD	8015M	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5MSD	6264821	MSD	METHOD	8315A	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5DUP	6264822	DUP	3050B	6010B	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5DUP	6264822	DUP	3050B	6020	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5DUP	6264822	DUP	3060A	7199	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5DUP	6264822	DUP	METHOD	300.0	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5DUP	6264822	DUP	METHOD	314.0	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5DUP	6264822	DUP	METHOD	7471A	III
20-Apr-2011	SL-120-SA8N-SS-0.0-0.5DUP	6264822	DUP	METHOD	9012B	III
20-Apr-2011	DUP05-SA8N-QC-042011	6264828	FD	3050B	6010B	III
20-Apr-2011	DUP05-SA8N-QC-042011	6264828	FD	3050B	6020	III
20-Apr-2011	DUP05-SA8N-QC-042011	6264828	FD	3060A	7199	III
20-Apr-2011	DUP05-SA8N-QC-042011	6264828	FD	3546	1625C	III
20-Apr-2011	DUP05-SA8N-QC-042011	6264828	FD	3550B	8015B	III
20-Apr-2011	DUP05-SA8N-QC-042011	6264828	FD	3550B	8015M	III
20-Apr-2011	DUP05-SA8N-QC-042011	6264828	FD	3550B	8082	III
20-Apr-2011	DUP05-SA8N-QC-042011	6264828	FD	3550B	8270C	III
20-Apr-2011	DUP05-SA8N-QC-042011	6264828	FD	3550B	8270C SIM	III
20-Apr-2011	DUP05-SA8N-QC-042011	6264828	FD	8330	8330A	III
20-Apr-2011	DUP05-SA8N-QC-042011	6264828	FD	METHOD	300.0	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
20-Apr-2011	DUP05-SA8N-QC-042011	6264828	FD	METHOD	314.0	III
20-Apr-2011	DUP05-SA8N-QC-042011	6264828	FD	METHOD	7471A	III
20-Apr-2011	DUP05-SA8N-QC-042011	6264828	FD	METHOD	8015B	III
20-Apr-2011	DUP05-SA8N-QC-042011	6264828	FD	METHOD	8015M	III
20-Apr-2011	DUP05-SA8N-QC-042011	6264828	FD	METHOD	8315A	III
20-Apr-2011	DUP05-SA8N-QC-042011	6264828	FD	METHOD	9012B	III
20-Apr-2011	SL-137-SA8N-SS-0.0-0.5	6264827	N	3050B	6010B	III
20-Apr-2011	SL-137-SA8N-SS-0.0-0.5	6264827	N	3050B	6020	III
20-Apr-2011	SL-137-SA8N-SS-0.0-0.5	6264827	N	3060A	7199	III
20-Apr-2011	SL-137-SA8N-SS-0.0-0.5	6264827	N	3550B	8082	III
20-Apr-2011	SL-137-SA8N-SS-0.0-0.5	6264827	N	3550B	8270C	III
20-Apr-2011	SL-137-SA8N-SS-0.0-0.5	6264827	N	3550B	8270C SIM	III
20-Apr-2011	SL-137-SA8N-SS-0.0-0.5	6264827	N	METHOD	300.0	III
20-Apr-2011	SL-137-SA8N-SS-0.0-0.5	6264827	N	METHOD	314.0	III
20-Apr-2011	SL-137-SA8N-SS-0.0-0.5	6264827	N	METHOD	7471A	III
20-Apr-2011	EB07-SA8N-SS-042011	6264829	EB	3005A	6010B	III
20-Apr-2011	EB07-SA8N-SS-042011	6264829	EB	3020A	6020	III
20-Apr-2011	EB07-SA8N-SS-042011	6264829	EB	3510C	8082	III
20-Apr-2011	EB07-SA8N-SS-042011	6264829	EB	3510C	8270C	III
20-Apr-2011	EB07-SA8N-SS-042011	6264829	EB	3510C	8270C SIM	III
20-Apr-2011	EB07-SA8N-SS-042011	6264829	EB	Gen Prep	300.0	III
20-Apr-2011	EB07-SA8N-SS-042011	6264829	EB	Gen Prep	314.0	III
20-Apr-2011	EB07-SA8N-SS-042011	6264829	EB	Gen Prep	7199	III
20-Apr-2011	EB07-SA8N-SS-042011	6264829	EB	METHOD	7470A	III
20-Apr-2011	SL-098-SA8N-SS-0.0-0.5	6264815	N	3050B	6010B	III
20-Apr-2011	SL-098-SA8N-SS-0.0-0.5	6264815	N	3050B	6020	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
20-Apr-2011	SL-098-SA8N-SS-0.0-0.5	6264815	N	3060A	7199	III
20-Apr-2011	SL-098-SA8N-SS-0.0-0.5	6264815	N	3550B	8082	III
20-Apr-2011	SL-098-SA8N-SS-0.0-0.5	6264815	N	3550B	8270C	III
20-Apr-2011	SL-098-SA8N-SS-0.0-0.5	6264815	N	3550B	8270C SIM	III
20-Apr-2011	SL-098-SA8N-SS-0.0-0.5	6264815	N	METHOD	300.0	III
20-Apr-2011	SL-098-SA8N-SS-0.0-0.5	6264815	N	METHOD	314.0	III
20-Apr-2011	SL-098-SA8N-SS-0.0-0.5	6264815	N	METHOD	7471A	III
20-Apr-2011	SL-101-SA8N-SS-0.0-0.5	6264816	N	3050B	6010B	III
20-Apr-2011	SL-101-SA8N-SS-0.0-0.5	6264816	N	3050B	6020	III
20-Apr-2011	SL-101-SA8N-SS-0.0-0.5	6264816	N	3060A	7199	III
20-Apr-2011	SL-101-SA8N-SS-0.0-0.5	6264816	N	3546	1625C	III
20-Apr-2011	SL-101-SA8N-SS-0.0-0.5	6264816	N	3550B	8015B	III
20-Apr-2011	SL-101-SA8N-SS-0.0-0.5	6264816	N	3550B	8015M	III
20-Apr-2011	SL-101-SA8N-SS-0.0-0.5	6264816	N	3550B	8082	III
20-Apr-2011	SL-101-SA8N-SS-0.0-0.5	6264816	N	3550B	8270C	III
20-Apr-2011	SL-101-SA8N-SS-0.0-0.5	6264816	N	3550B	8270C SIM	III
20-Apr-2011	SL-101-SA8N-SS-0.0-0.5	6264816	N	8330	8330A	III
20-Apr-2011	SL-101-SA8N-SS-0.0-0.5	6264816	N	METHOD	300.0	III
20-Apr-2011	SL-101-SA8N-SS-0.0-0.5	6264816	N	METHOD	314.0	III
20-Apr-2011	SL-101-SA8N-SS-0.0-0.5	6264816	N	METHOD	7471A	III
20-Apr-2011	SL-101-SA8N-SS-0.0-0.5	6264816	N	METHOD	8015B	III
20-Apr-2011	SL-101-SA8N-SS-0.0-0.5	6264816	N	METHOD	8015M	III
20-Apr-2011	SL-101-SA8N-SS-0.0-0.5	6264816	N	METHOD	8315A	III
20-Apr-2011	SL-101-SA8N-SS-0.0-0.5	6264816	N	METHOD	9012B	III
20-Apr-2011	SL-102-SA8N-SS-0.0-0.5	6264817	N	3050B	6010B	III
20-Apr-2011	SL-102-SA8N-SS-0.0-0.5	6264817	N	3050B	6020	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
20-Apr-2011	SL-102-SA8N-SS-0.0-0.5	6264817	N	3060A	7199	III
20-Apr-2011	SL-102-SA8N-SS-0.0-0.5	6264817	N	3546	1625C	III
20-Apr-2011	SL-102-SA8N-SS-0.0-0.5	6264817	N	3550B	8015B	III
20-Apr-2011	SL-102-SA8N-SS-0.0-0.5	6264817	N	3550B	8015M	III
20-Apr-2011	SL-102-SA8N-SS-0.0-0.5	6264817	N	3550B	8082	III
20-Apr-2011	SL-102-SA8N-SS-0.0-0.5	6264817	N	3550B	8270C	III
20-Apr-2011	SL-102-SA8N-SS-0.0-0.5	6264817	N	3550B	8270C SIM	III
20-Apr-2011	SL-102-SA8N-SS-0.0-0.5	6264817	N	8330	8330A	III
20-Apr-2011	SL-102-SA8N-SS-0.0-0.5	6264817	N	METHOD	300.0	III
20-Apr-2011	SL-102-SA8N-SS-0.0-0.5	6264817	N	METHOD	314.0	III
20-Apr-2011	SL-102-SA8N-SS-0.0-0.5	6264817	N	METHOD	7471A	III
20-Apr-2011	SL-102-SA8N-SS-0.0-0.5	6264817	N	METHOD	8015B	III
20-Apr-2011	SL-102-SA8N-SS-0.0-0.5	6264817	N	METHOD	8015M	III
20-Apr-2011	SL-102-SA8N-SS-0.0-0.5	6264817	N	METHOD	8315A	III
20-Apr-2011	SL-102-SA8N-SS-0.0-0.5	6264817	N	METHOD	9012B	III
20-Apr-2011	SL-108-SA8N-SS-0.0-0.5	6264818	N	3050B	6010B	III
20-Apr-2011	SL-108-SA8N-SS-0.0-0.5	6264818	N	3050B	6020	III
20-Apr-2011	SL-108-SA8N-SS-0.0-0.5	6264818	N	3060A	7199	III
20-Apr-2011	SL-108-SA8N-SS-0.0-0.5	6264818	N	3546	1625C	III
20-Apr-2011	SL-108-SA8N-SS-0.0-0.5	6264818	N	3550B	8015B	III
20-Apr-2011	SL-108-SA8N-SS-0.0-0.5	6264818	N	3550B	8015M	III
20-Apr-2011	SL-108-SA8N-SS-0.0-0.5	6264818	N	3550B	8082	III
20-Apr-2011	SL-108-SA8N-SS-0.0-0.5	6264818	N	3550B	8270C	III
20-Apr-2011	SL-108-SA8N-SS-0.0-0.5	6264818	N	3550B	8270C SIM	III
20-Apr-2011	SL-108-SA8N-SS-0.0-0.5	6264818	N	8330	8330A	III
20-Apr-2011	SL-108-SA8N-SS-0.0-0.5	6264818	N	METHOD	300.0	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
20-Apr-2011	SL-108-SA8N-SS-0.0-0.5	6264818	N	METHOD	314.0	III
20-Apr-2011	SL-108-SA8N-SS-0.0-0.5	6264818	N	METHOD	7471A	III
20-Apr-2011	SL-108-SA8N-SS-0.0-0.5	6264818	N	METHOD	8015B	III
20-Apr-2011	SL-108-SA8N-SS-0.0-0.5	6264818	N	METHOD	8015M	III
20-Apr-2011	SL-108-SA8N-SS-0.0-0.5	6264818	N	METHOD	8315A	III
20-Apr-2011	SL-108-SA8N-SS-0.0-0.5	6264818	N	METHOD	9012B	III

III = EPA Level 3 Data Review
IV = EPA Level 4 Data Validation
N = Normal Sample
FD = Field Duplicate
TB = Trip Blank
FB = Field Blank
MS = Matrix Spike
MSD = Matrix Spike Duplicate

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory:** LL

EDD Filename: PrepDE132_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** AQ

Sample ID: EB07-SA8N-SS-042011 *Collected:* 4/20/2011 12:30:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	0.0199	J	0.0138	MDL	0.0500	PQL	mg/L	UJ	B
CALCIUM	0.0800	J	0.0702	MDL	0.200	PQL	mg/L	J	Z

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: DUP05-SA8N-QC-042011 *Collected:* 4/20/2011 10:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	322		0.0836	MDL	0.536	PQL	mg/Kg	J	E
PHOSPHORUS	463		0.600	MDL	10.7	PQL	mg/Kg	J	E
POTASSIUM	4010		19.3	MDL	53.6	PQL	mg/Kg	J	E
SODIUM	94.9	J	40.0	MDL	107	PQL	mg/Kg	J	Z
TIN	2.72	J	1.07	MDL	10.7	PQL	mg/Kg	U	B

Sample ID: SL-098-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 12:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	322		0.0905	MDL	0.580	PQL	mg/Kg	J	E
PHOSPHORUS	312		0.650	MDL	11.6	PQL	mg/Kg	J	E
POTASSIUM	3210		20.9	MDL	58.0	PQL	mg/Kg	J	E
SODIUM	101	J	43.3	MDL	116	PQL	mg/Kg	J	Z
TIN	2.80	J	1.16	MDL	11.6	PQL	mg/Kg	U	B
Zirconium	0.979	J	0.974	MDL	5.80	PQL	mg/Kg	J	Z

Sample ID: SL-101-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 1:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	395		0.0901	MDL	0.578	PQL	mg/Kg	J	E
PHOSPHORUS	456		0.647	MDL	11.6	PQL	mg/Kg	J	E
POTASSIUM	4030		20.8	MDL	57.8	PQL	mg/Kg	J	E
SODIUM	86.1	J	43.1	MDL	116	PQL	mg/Kg	J	Z
TIN	2.82	J	1.16	MDL	11.6	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory:** LL

EDD Filename: PrepDE132_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-102-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 1:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.46	J	1.02	MDL	5.73	PQL	mg/Kg	J	Z
MANGANESE	258		0.0894	MDL	0.573	PQL	mg/Kg	J	E
PHOSPHORUS	372		0.642	MDL	11.5	PQL	mg/Kg	J	E
POTASSIUM	3010		20.6	MDL	57.3	PQL	mg/Kg	J	E
SODIUM	85.9	J	42.7	MDL	115	PQL	mg/Kg	J	Z
TIN	2.66	J	1.15	MDL	11.5	PQL	mg/Kg	U	B

Sample ID: SL-108-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 1:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	259		0.0789	MDL	0.506	PQL	mg/Kg	J	E
PHOSPHORUS	813		0.566	MDL	10.1	PQL	mg/Kg	J	E
POTASSIUM	3040		18.2	MDL	50.6	PQL	mg/Kg	J	E
TIN	5.98	J	1.01	MDL	10.1	PQL	mg/Kg	U	B

Sample ID: SL-120-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 10:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	371		0.0799	MDL	0.512	PQL	mg/Kg	J	E
PHOSPHORUS	467		0.573	MDL	10.2	PQL	mg/Kg	J	E
POTASSIUM	4980		18.4	MDL	51.2	PQL	mg/Kg	J	E
TIN	2.81	J	1.02	MDL	10.2	PQL	mg/Kg	U	B

Sample ID: SL-127-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 9:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	344		0.0820	MDL	0.525	PQL	mg/Kg	J	E
PHOSPHORUS	407		0.588	MDL	10.5	PQL	mg/Kg	J	E
POTASSIUM	3750		18.9	MDL	52.5	PQL	mg/Kg	J	E
TIN	2.57	J	1.05	MDL	10.5	PQL	mg/Kg	U	B

Sample ID: SL-128-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 8:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	378		0.0910	MDL	0.583	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory:** LL

EDD Filename: PrepDE132_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-128-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 8:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHOSPHORUS	278		0.653	MDL	11.7	PQL	mg/Kg	J	E
POTASSIUM	3140		21.0	MDL	58.3	PQL	mg/Kg	J	E
SODIUM	107	J	43.5	MDL	117	PQL	mg/Kg	J	Z
TIN	2.94	J	1.17	MDL	11.7	PQL	mg/Kg	U	B

Sample ID: SL-129-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 8:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	335		0.0835	MDL	0.535	PQL	mg/Kg	J	E
PHOSPHORUS	281		0.599	MDL	10.7	PQL	mg/Kg	J	E
POTASSIUM	3590		19.3	MDL	53.5	PQL	mg/Kg	J	E
TIN	2.67	J	1.07	MDL	10.7	PQL	mg/Kg	U	B

Sample ID: SL-136-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 9:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.67	J	1.02	MDL	5.76	PQL	mg/Kg	J	Z
MANGANESE	302		0.0898	MDL	0.576	PQL	mg/Kg	J	E
PHOSPHORUS	345		0.645	MDL	11.5	PQL	mg/Kg	J	E
POTASSIUM	2540		20.7	MDL	57.6	PQL	mg/Kg	J	E
SODIUM	108	J	43.0	MDL	115	PQL	mg/Kg	J	Z
TIN	3.20	J	1.15	MDL	11.5	PQL	mg/Kg	U	B

Sample ID: SL-137-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 10:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	270		0.0782	MDL	0.501	PQL	mg/Kg	J	E
PHOSPHORUS	503		0.561	MDL	10.0	PQL	mg/Kg	J	E
POTASSIUM	3350		18.0	MDL	50.1	PQL	mg/Kg	J	E
TIN	2.43	J	1.00	MDL	10.0	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory:** LL

EDD Filename: PrepDE132_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: DUP05-SA8N-QC-042011 ***Collected:*** 4/20/2011 10:10:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.216		0.0624	MDL	0.208	PQL	mg/Kg	J	Q
ARSENIC	5.86		0.0832	MDL	0.416	PQL	mg/Kg	J	Q, E
BERYLLIUM	0.658		0.0166	MDL	0.104	PQL	mg/Kg	J	Q
CADMIUM	0.438		0.0416	MDL	0.104	PQL	mg/Kg	J	Q
CHROMIUM	24.0		0.125	MDL	0.416	PQL	mg/Kg	J	E, A
COBALT	12.6		0.0208	MDL	0.104	PQL	mg/Kg	J	Q, E
COPPER	17.0		0.0687	MDL	0.416	PQL	mg/Kg	J	Q, A
LEAD	20.8		0.0108	MDL	0.208	PQL	mg/Kg	J	E, A
NICKEL	16.6		0.104	MDL	0.416	PQL	mg/Kg	J	Q, E
SILVER	0.106		0.0125	MDL	0.104	PQL	mg/Kg	J	Q
VANADIUM	44.0		0.0229	MDL	0.104	PQL	mg/Kg	J	A
ZINC	118		0.583	MDL	3.12	PQL	mg/Kg	J	A

Sample ID: DUP05-SA8N-QC-042011 ***Collected:*** 4/20/2011 10:10:00 ***Analysis Type:*** REA6 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.193	J	0.0416	MDL	0.416	PQL	mg/Kg	J	Z

Sample ID: DUP05-SA8N-QC-042011 ***Collected:*** 4/20/2011 10:10:00 ***Analysis Type:*** REA8 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	113		0.112	MDL	0.416	PQL	mg/Kg	J	E

Sample ID: SL-098-SA8N-SS-0.0-0.5 ***Collected:*** 4/20/2011 12:45:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.175	J	0.0703	MDL	0.234	PQL	mg/Kg	J	Z, Q
ARSENIC	5.04		0.0937	MDL	0.468	PQL	mg/Kg	J	Q, E
BERYLLIUM	0.707		0.0187	MDL	0.117	PQL	mg/Kg	J	Q
CADMIUM	0.255		0.0468	MDL	0.117	PQL	mg/Kg	J	Q
CHROMIUM	20.8		0.141	MDL	0.468	PQL	mg/Kg	J	E, A
COBALT	6.68		0.0234	MDL	0.117	PQL	mg/Kg	J	Q, E
COPPER	10.2		0.0773	MDL	0.468	PQL	mg/Kg	J	Q, A
LEAD	9.23		0.0122	MDL	0.234	PQL	mg/Kg	J	E, A
NICKEL	13.1		0.117	MDL	0.468	PQL	mg/Kg	J	Q, E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory:** LL

EDD Filename: PrepDE132_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-098-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 12:45:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0280	J	0.0141	MDL	0.117	PQL	mg/Kg	J	Z, Q
VANADIUM	40.8		0.0258	MDL	0.117	PQL	mg/Kg	J	A
ZINC	76.9		0.656	MDL	3.51	PQL	mg/Kg	J	A

Sample ID: SL-098-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 12:45:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.139	J	0.0468	MDL	0.468	PQL	mg/Kg	J	Z

Sample ID: SL-098-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 12:45:00 *Analysis Type:* REA8 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	109		0.126	MDL	0.468	PQL	mg/Kg	J	E

Sample ID: SL-101-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 1:10:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.142	J	0.0680	MDL	0.227	PQL	mg/Kg	J	Z, Q
ARSENIC	4.24		0.0906	MDL	0.453	PQL	mg/Kg	J	Q, E
BERYLLIUM	0.631		0.0181	MDL	0.113	PQL	mg/Kg	J	Q
CADMIUM	0.230		0.0453	MDL	0.113	PQL	mg/Kg	J	Q
CHROMIUM	17.8		0.136	MDL	0.453	PQL	mg/Kg	J	E, A
COBALT	6.05		0.0227	MDL	0.113	PQL	mg/Kg	J	Q, E
COPPER	10.4		0.0748	MDL	0.453	PQL	mg/Kg	J	Q, A
LEAD	16.9		0.0118	MDL	0.227	PQL	mg/Kg	J	E, A
NICKEL	12.3		0.113	MDL	0.453	PQL	mg/Kg	J	Q, E
SILVER	0.0376	J	0.0136	MDL	0.113	PQL	mg/Kg	J	Z, Q
VANADIUM	33.6		0.0249	MDL	0.113	PQL	mg/Kg	J	A
ZINC	71.8		0.634	MDL	3.40	PQL	mg/Kg	J	A

Sample ID: SL-101-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 1:10:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.127	J	0.0453	MDL	0.453	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory:** LL

EDD Filename: PrepDE132_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-101-SA8N-SS-0.0-0.5 **Collected:** 4/20/2011 1:10:00 **Analysis Type:** REA8 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	105		0.122	MDL	0.453	PQL	mg/Kg	J	E

Sample ID: SL-102-SA8N-SS-0.0-0.5 **Collected:** 4/20/2011 1:30:00 **Analysis Type:** REA4 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.224	J	0.0694	MDL	0.231	PQL	mg/Kg	J	Z, Q
ARSENIC	4.94		0.0926	MDL	0.463	PQL	mg/Kg	J	Q, E
BERYLLIUM	0.794		0.0185	MDL	0.116	PQL	mg/Kg	J	Q
CADMIUM	0.469		0.0463	MDL	0.116	PQL	mg/Kg	J	Q
CHROMIUM	21.7		0.139	MDL	0.463	PQL	mg/Kg	J	E, A
COBALT	7.38		0.0231	MDL	0.116	PQL	mg/Kg	J	Q, E
COPPER	12.5		0.0764	MDL	0.463	PQL	mg/Kg	J	Q, A
LEAD	17.2		0.0120	MDL	0.231	PQL	mg/Kg	J	E, A
NICKEL	14.6		0.116	MDL	0.463	PQL	mg/Kg	J	Q, E
SILVER	0.0460	J	0.0139	MDL	0.116	PQL	mg/Kg	J	Z, Q
VANADIUM	41.9		0.0255	MDL	0.116	PQL	mg/Kg	J	A
ZINC	115		0.648	MDL	3.47	PQL	mg/Kg	J	A

Sample ID: SL-102-SA8N-SS-0.0-0.5 **Collected:** 4/20/2011 1:30:00 **Analysis Type:** REA6 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.145	J	0.0463	MDL	0.463	PQL	mg/Kg	J	Z

Sample ID: SL-102-SA8N-SS-0.0-0.5 **Collected:** 4/20/2011 1:30:00 **Analysis Type:** REA8 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	110		0.125	MDL	0.463	PQL	mg/Kg	J	E

Sample ID: SL-108-SA8N-SS-0.0-0.5 **Collected:** 4/20/2011 1:50:00 **Analysis Type:** REA10 **Dilution:** 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ZINC	649		2.78	MDL	14.9	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: PrepDE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: **SL-108-SA8N-SS-0.0-0.5** ***Collected:*** **4/20/2011 1:50:00** ***Analysis Type:*** **REA11** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.279	J	0.0397	MDL	0.397	PQL	mg/Kg	J	Z, Q

Sample ID: **SL-108-SA8N-SS-0.0-0.5** ***Collected:*** **4/20/2011 1:50:00** ***Analysis Type:*** **REA13** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	126		0.107	MDL	0.397	PQL	mg/Kg	J	A

Sample ID: **SL-108-SA8N-SS-0.0-0.5** ***Collected:*** **4/20/2011 1:50:00** ***Analysis Type:*** **REA9** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.15		0.0595	MDL	0.198	PQL	mg/Kg	J	Q
BERYLLIUM	0.331		0.0159	MDL	0.0991	PQL	mg/Kg	J	Q
CHROMIUM	24.7		0.119	MDL	0.397	PQL	mg/Kg	J	A
COBALT	6.91		0.0198	MDL	0.0991	PQL	mg/Kg	J	A
COPPER	29.2		0.0654	MDL	0.397	PQL	mg/Kg	J	A
LEAD	57.6		0.0103	MDL	0.198	PQL	mg/Kg	J	A
NICKEL	23.7		0.0991	MDL	0.397	PQL	mg/Kg	J	A
VANADIUM	40.4		0.0218	MDL	0.0991	PQL	mg/Kg	J	A

Sample ID: **SL-120-SA8N-SS-0.0-0.5** ***Collected:*** **4/20/2011 10:05:00** ***Analysis Type:*** **REA4** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.308		0.0620	MDL	0.207	PQL	mg/Kg	J	Q
ARSENIC	6.25		0.0827	MDL	0.414	PQL	mg/Kg	J	Q, E
BERYLLIUM	0.758		0.0165	MDL	0.103	PQL	mg/Kg	J	Q
CADMIUM	0.466		0.0414	MDL	0.103	PQL	mg/Kg	J	Q
CHROMIUM	28.3		0.124	MDL	0.414	PQL	mg/Kg	J	E, A
COBALT	9.63		0.0207	MDL	0.103	PQL	mg/Kg	J	Q, E
COPPER	17.8		0.0682	MDL	0.414	PQL	mg/Kg	J	Q, A
LEAD	20.4		0.0108	MDL	0.207	PQL	mg/Kg	J	E, A
NICKEL	18.3		0.103	MDL	0.414	PQL	mg/Kg	J	Q, E
SILVER	0.0736	J	0.0124	MDL	0.103	PQL	mg/Kg	J	Z, Q
VANADIUM	50.4		0.0227	MDL	0.103	PQL	mg/Kg	J	A
ZINC	121		0.579	MDL	3.10	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: PrepDE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-120-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 10:05:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.165	J	0.0414	MDL	0.414	PQL	mg/Kg	J	Z

Sample ID: SL-120-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 10:05:00 *Analysis Type:* REA8 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	129		0.112	MDL	0.414	PQL	mg/Kg	J	E

Sample ID: SL-127-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 9:10:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.206	J	0.0630	MDL	0.210	PQL	mg/Kg	J	Z, Q
ARSENIC	4.64		0.0841	MDL	0.420	PQL	mg/Kg	J	Q, E
BERYLLIUM	0.638		0.0168	MDL	0.105	PQL	mg/Kg	J	Q
CADMIUM	0.301		0.0420	MDL	0.105	PQL	mg/Kg	J	Q
CHROMIUM	19.4		0.126	MDL	0.420	PQL	mg/Kg	J	E, A
COBALT	7.15		0.0210	MDL	0.105	PQL	mg/Kg	J	Q, E
COPPER	11.8		0.0694	MDL	0.420	PQL	mg/Kg	J	Q, A
LEAD	16.8		0.0109	MDL	0.210	PQL	mg/Kg	J	E, A
NICKEL	14.0		0.105	MDL	0.420	PQL	mg/Kg	J	Q, E
SILVER	0.0470	J	0.0126	MDL	0.105	PQL	mg/Kg	J	Z, Q
VANADIUM	36.7		0.0231	MDL	0.105	PQL	mg/Kg	J	A
ZINC	103		0.588	MDL	3.15	PQL	mg/Kg	J	A

Sample ID: SL-127-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 9:10:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.186	J	0.0420	MDL	0.420	PQL	mg/Kg	J	Z

Sample ID: SL-127-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 9:10:00 *Analysis Type:* REA8 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	108		0.113	MDL	0.420	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory:** LL

EDD Filename: PrepDE132_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-128-SA8N-SS-0.0-0.5 **Collected:** 4/20/2011 8:55:00 **Analysis Type:** REA4 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.109	J	0.0714	MDL	0.238	PQL	mg/Kg	J	Z, Q
ARSENIC	5.97		0.0952	MDL	0.476	PQL	mg/Kg	J	Q, E
BERYLLIUM	0.845		0.0190	MDL	0.119	PQL	mg/Kg	J	Q
CADMIUM	0.350		0.0476	MDL	0.119	PQL	mg/Kg	J	Q
CHROMIUM	27.0		0.143	MDL	0.476	PQL	mg/Kg	J	E, A
COBALT	9.50		0.0238	MDL	0.119	PQL	mg/Kg	J	Q, E
COPPER	14.9		0.0785	MDL	0.476	PQL	mg/Kg	J	Q, A
LEAD	17.7		0.0124	MDL	0.238	PQL	mg/Kg	J	E, A
NICKEL	19.8		0.119	MDL	0.476	PQL	mg/Kg	J	Q, E
SILVER	0.0511	J	0.0143	MDL	0.119	PQL	mg/Kg	J	Z, Q
VANADIUM	48.5		0.0262	MDL	0.119	PQL	mg/Kg	J	A
ZINC	109		0.666	MDL	3.57	PQL	mg/Kg	J	A

Sample ID: SL-128-SA8N-SS-0.0-0.5 **Collected:** 4/20/2011 8:55:00 **Analysis Type:** REA6 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.167	J	0.0476	MDL	0.476	PQL	mg/Kg	J	Z

Sample ID: SL-128-SA8N-SS-0.0-0.5 **Collected:** 4/20/2011 8:55:00 **Analysis Type:** REA8 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	153		0.129	MDL	0.476	PQL	mg/Kg	J	E

Sample ID: SL-129-SA8N-SS-0.0-0.5 **Collected:** 4/20/2011 8:35:00 **Analysis Type:** REA4 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.129	J	0.0630	MDL	0.210	PQL	mg/Kg	J	Z, Q
ARSENIC	5.47		0.0840	MDL	0.420	PQL	mg/Kg	J	Q, E
BERYLLIUM	0.713		0.0168	MDL	0.105	PQL	mg/Kg	J	Q
CADMIUM	0.189		0.0420	MDL	0.105	PQL	mg/Kg	J	Q
CHROMIUM	21.0		0.126	MDL	0.420	PQL	mg/Kg	J	E, A
COBALT	7.43		0.0210	MDL	0.105	PQL	mg/Kg	J	Q, E
COPPER	11.6		0.0693	MDL	0.420	PQL	mg/Kg	J	Q, A
LEAD	9.59		0.0109	MDL	0.210	PQL	mg/Kg	J	E, A
NICKEL	14.7		0.105	MDL	0.420	PQL	mg/Kg	J	Q, E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: PrepDE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-129-SA8N-SS-0.0-0.5 **Collected:** 4/20/2011 8:35:00 **Analysis Type:** REA4 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0305	J	0.0126	MDL	0.105	PQL	mg/Kg	J	Z, Q
VANADIUM	41.1		0.0231	MDL	0.105	PQL	mg/Kg	J	A
ZINC	74.2		0.588	MDL	3.15	PQL	mg/Kg	J	A

Sample ID: SL-129-SA8N-SS-0.0-0.5 **Collected:** 4/20/2011 8:35:00 **Analysis Type:** REA6 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.149	J	0.0420	MDL	0.420	PQL	mg/Kg	J	Z

Sample ID: SL-129-SA8N-SS-0.0-0.5 **Collected:** 4/20/2011 8:35:00 **Analysis Type:** REA8 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	119		0.113	MDL	0.420	PQL	mg/Kg	J	E

Sample ID: SL-136-SA8N-SS-0.0-0.5 **Collected:** 4/20/2011 9:55:00 **Analysis Type:** REA4 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.108	J	0.0698	MDL	0.233	PQL	mg/Kg	J	Z, Q
ARSENIC	6.93		0.0930	MDL	0.465	PQL	mg/Kg	J	Q, E
BERYLLIUM	0.826		0.0186	MDL	0.116	PQL	mg/Kg	J	Q
CADMIUM	0.119		0.0465	MDL	0.116	PQL	mg/Kg	J	Q
CHROMIUM	25.2		0.140	MDL	0.465	PQL	mg/Kg	J	E, A
COBALT	8.15		0.0233	MDL	0.116	PQL	mg/Kg	J	Q, E
COPPER	14.8		0.0767	MDL	0.465	PQL	mg/Kg	J	Q, A
LEAD	8.98		0.0121	MDL	0.233	PQL	mg/Kg	J	E, A
NICKEL	17.1		0.116	MDL	0.465	PQL	mg/Kg	J	Q, E
SILVER	0.0360	J	0.0140	MDL	0.116	PQL	mg/Kg	J	Z, Q
VANADIUM	45.1		0.0256	MDL	0.116	PQL	mg/Kg	J	A
ZINC	65.7		0.651	MDL	3.49	PQL	mg/Kg	J	A

Sample ID: SL-136-SA8N-SS-0.0-0.5 **Collected:** 4/20/2011 9:55:00 **Analysis Type:** REA6 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.143	J	0.0465	MDL	0.465	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: PrepDE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-136-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 9:55:00 *Analysis Type:* REA8 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	124		0.126	MDL	0.465	PQL	mg/Kg	J	E

Sample ID: SL-137-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 10:25:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.105	J	0.0607	MDL	0.202	PQL	mg/Kg	J	Z, Q
ARSENIC	4.70		0.0810	MDL	0.405	PQL	mg/Kg	J	Q, E
BERYLLIUM	0.489		0.0162	MDL	0.101	PQL	mg/Kg	J	Q
CADMIUM	0.362		0.0405	MDL	0.101	PQL	mg/Kg	J	Q
CHROMIUM	21.3		0.121	MDL	0.405	PQL	mg/Kg	J	E, A
COBALT	6.95		0.0202	MDL	0.101	PQL	mg/Kg	J	Q, E
COPPER	12.2		0.0668	MDL	0.405	PQL	mg/Kg	J	Q, A
LEAD	29.7		0.0105	MDL	0.202	PQL	mg/Kg	J	E, A
NICKEL	14.3		0.101	MDL	0.405	PQL	mg/Kg	J	Q, E
SILVER	0.0667	J	0.0121	MDL	0.101	PQL	mg/Kg	J	Z, Q
VANADIUM	37.5		0.0223	MDL	0.101	PQL	mg/Kg	J	A
ZINC	84.5		0.567	MDL	3.04	PQL	mg/Kg	J	A

Sample ID: SL-137-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 10:25:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.106	J	0.0405	MDL	0.405	PQL	mg/Kg	J	Z

Sample ID: SL-137-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 10:25:00 *Analysis Type:* REA8 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	95.1		0.109	MDL	0.405	PQL	mg/Kg	J	E

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: DUP05-SA8N-QC-042011 *Collected:* 4/20/2011 10:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.91	J	0.21	MDL	1.1	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: PrepDE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: SL-098-SA8N-SS-0.0-0.5 **Collected:** 4/20/2011 12:45:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.70	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-101-SA8N-SS-0.0-0.5 **Collected:** 4/20/2011 1:10:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	1.1	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-102-SA8N-SS-0.0-0.5 **Collected:** 4/20/2011 1:30:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.50	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-120-SA8N-SS-0.0-0.5 **Collected:** 4/20/2011 10:05:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.89	J	0.21	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-127-SA8N-SS-0.0-0.5 **Collected:** 4/20/2011 9:10:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.57	J	0.21	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-128-SA8N-SS-0.0-0.5 **Collected:** 4/20/2011 8:55:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.43	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-129-SA8N-SS-0.0-0.5 **Collected:** 4/20/2011 8:35:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.44	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: PrepDE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **METALS**

Method: **7470A** ***Matrix:*** **AQ**

Sample ID: EB07-SA8N-SS-042011 ***Collected:*** 4/20/2011 12:30:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.000046	U	0.000046	MDL	0.00020	PQL	mg/L	UJ	L

Method Category: **METALS**

Method: **7471A** ***Matrix:*** **SO**

Sample ID: DUP05-SA8N-QC-042011 ***Collected:*** 4/20/2011 10:10:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0556	J	0.0028	MDL	0.0992	PQL	mg/Kg	J	Z, Q, FD

Sample ID: SL-102-SA8N-SS-0.0-0.5 ***Collected:*** 4/20/2011 1:30:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0058	J	0.0032	MDL	0.112	PQL	mg/Kg	J	Z, Q

Sample ID: SL-108-SA8N-SS-0.0-0.5 ***Collected:*** 4/20/2011 1:50:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0294	J	0.0027	MDL	0.0934	PQL	mg/Kg	J	Z, Q

Sample ID: SL-120-SA8N-SS-0.0-0.5 ***Collected:*** 4/20/2011 10:05:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0277	J	0.0029	MDL	0.102	PQL	mg/Kg	J	Z, Q, FD

Sample ID: SL-127-SA8N-SS-0.0-0.5 ***Collected:*** 4/20/2011 9:10:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0188	J	0.0029	MDL	0.102	PQL	mg/Kg	J	Z, Q

Sample ID: SL-128-SA8N-SS-0.0-0.5 ***Collected:*** 4/20/2011 8:55:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0148	J	0.0033	MDL	0.115	PQL	mg/Kg	J	Z, Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: PrepDE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: SL-129-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 8:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0049	J	0.0029	MDL	0.100	PQL	mg/Kg	J	Z, Q

Sample ID: SL-136-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 9:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0093	J	0.0032	MDL	0.111	PQL	mg/Kg	J	Z, Q

Sample ID: SL-137-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 10:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.267		0.0028	MDL	0.0978	PQL	mg/Kg	J	Q

Method Category: SVOA

Method: 1625C **Matrix: SO**

Sample ID: DUP05-SA8N-QC-042011 *Collected:* 4/20/2011 10:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	58.8		17.8	MDL	35.5	PQL	ng/Kg	J	FD

Sample ID: SL-108-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 1:50:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	616	J	337	MDL	674	PQL	ng/Kg	J	Z

Sample ID: SL-120-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 10:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	149		17.8	MDL	35.5	PQL	ng/Kg	J	Q, FD

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: PrepDE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-101-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 1:10:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	1.1	J	0.47	MDL	1.4	PQL	mg/Kg	J	Z

Sample ID: SL-102-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 1:30:00 *Analysis Type:* REA2 *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	2.4	J	2.3	MDL	6.9	PQL	mg/Kg	J	Z

Sample ID: SL-108-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 1:50:00 *Analysis Type:* REA2 *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	61	J	40	MDL	120	PQL	mg/Kg	J	Z

Sample ID: SL-127-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 9:10:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	1.1	J	0.43	MDL	1.3	PQL	mg/Kg	J	Z

Sample ID: SL-128-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 8:55:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	1.0	J	0.96	MDL	2.9	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: SL-098-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 12:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	0.92	J	0.40	MDL	2.1	PQL	ug/Kg	J	Z
AROCLOR 1260	0.59	J	0.47	MDL	2.1	PQL	ug/Kg	J	Z

Sample ID: SL-101-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 1:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	1.4	J	0.38	MDL	2.0	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory:** LL

EDD Filename: PrepDE132_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8082 **Matrix:** SO

Sample ID: SL-101-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 1:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	3.5	J	1.2	MDL	3.8	PQL	ug/Kg	J	Z

Sample ID: SL-102-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 1:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	3.3	J	1.2	MDL	3.8	PQL	ug/Kg	J	Z

Sample ID: SL-128-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 8:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	1.0	J	0.47	MDL	2.0	PQL	ug/Kg	J	Z

Sample ID: SL-136-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 9:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	3.3	J	1.2	MDL	3.9	PQL	ug/Kg	J	Z

Sample ID: SL-137-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 10:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	8.1	J	2.0	MDL	8.8	PQL	ug/Kg	J	Z
Aroclor 5460	9.4	J	5.2	MDL	17	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8270C **Matrix:** AQ

Sample ID: EB07-SA8N-SS-042011 *Collected:* 4/20/2011 12:30:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	6	U	6	MDL	16	PQL	ug/L	UJ	E

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: PrepDE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: DUP05-SA8N-QC-042011 *Collected:* 4/20/2011 10:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	40	J	18	MDL	350	PQL	ug/Kg	J	Z
Di-n-butylphthalate	38	J	18	MDL	180	PQL	ug/Kg	J	Z, FD

Sample ID: SL-098-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 12:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	36	J	20	MDL	400	PQL	ug/Kg	J	Z

Sample ID: SL-101-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 1:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	43	J	19	MDL	390	PQL	ug/Kg	J	Z

Sample ID: SL-102-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 1:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	36	J	19	MDL	380	PQL	ug/Kg	J	Z

Sample ID: SL-108-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 1:50:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	100	J	84	MDL	840	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	98	J	84	MDL	840	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	520	J	84	MDL	1700	PQL	ug/Kg	J	Z
Di-n-butylphthalate	110	J	84	MDL	840	PQL	ug/Kg	J	Z
FLUORANTHENE	110	J	84	MDL	840	PQL	ug/Kg	J	Z
PYRENE	100	J	84	MDL	840	PQL	ug/Kg	J	Z

Sample ID: SL-120-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 10:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZIDINE	1200	U	1200	MDL	3500	PQL	ug/Kg	R	Q
BIS(2-ETHYLHEXYL)PHTHALATE	28	J	18	MDL	350	PQL	ug/Kg	J	Z
Di-n-butylphthalate	18	U	18	MDL	180	PQL	ug/Kg	UJ	FD

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory:** LL

EDD Filename: PrepDE132_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-127-SA8N-SS-0.0-0.5 ***Collected:*** 4/20/2011 9:10:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	39	J	18	MDL	350	PQL	ug/Kg	J	Z
Butylbenzylphthalate	20	J	18	MDL	180	PQL	ug/Kg	J	Z

Sample ID: SL-128-SA8N-SS-0.0-0.5 ***Collected:*** 4/20/2011 8:55:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	39	J	20	MDL	400	PQL	ug/Kg	J	Z
Di-n-butylphthalate	23	J	20	MDL	200	PQL	ug/Kg	J	Z

Sample ID: SL-129-SA8N-SS-0.0-0.5 ***Collected:*** 4/20/2011 8:35:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	22	J	18	MDL	360	PQL	ug/Kg	J	Z

Sample ID: SL-136-SA8N-SS-0.0-0.5 ***Collected:*** 4/20/2011 9:55:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	33	J	20	MDL	390	PQL	ug/Kg	J	Z
CHRYSENE	21	J	20	MDL	200	PQL	ug/Kg	J	Z
Di-n-butylphthalate	110	J	20	MDL	200	PQL	ug/Kg	J	Z
PYRENE	21	J	20	MDL	200	PQL	ug/Kg	J	Z

Sample ID: SL-137-SA8N-SS-0.0-0.5 ***Collected:*** 4/20/2011 10:25:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	120	J	86	MDL	860	PQL	ug/Kg	J	Z
ANTHRACENE	190	J	86	MDL	860	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	140	J	86	MDL	1700	PQL	ug/Kg	J	Z
CARBAZOLE	110	J	86	MDL	860	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	280	J	86	MDL	860	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	790	J	86	MDL	860	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: PrepDE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C SIM **Matrix: AQ**

Sample ID: EB07-SA8N-SS-042011 *Collected:* 4/20/2011 12:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.0099	U	0.0099	MDL	0.050	PQL	ug/L	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	0.16	J	0.050	MDL	0.99	PQL	ug/L	J	Z
Diethylphthalate	0.074	J	0.050	MDL	0.99	PQL	ug/L	J	Z
Di-n-butylphthalate	0.31	J	0.050	MDL	0.99	PQL	ug/L	J	Z
NAPHTHALENE	0.033	J	0.030	MDL	0.050	PQL	ug/L	J	Z

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: DUP05-SA8N-QC-042011 *Collected:* 4/20/2011 10:10:00 *Analysis Type:* RES *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	3.8	J	3.6	MDL	8.9	PQL	ug/Kg	J	Z, FD
2-METHYLNAPHTHALENE	6.0	J	3.6	MDL	8.9	PQL	ug/Kg	J	Z, FD
ACENAPHTHENE	37		3.6	MDL	8.9	PQL	ug/Kg	J	FD
ANTHRACENE	89		1.8	MDL	8.9	PQL	ug/Kg	J	FD
BENZO(A)ANTHRACENE	390		3.6	MDL	8.9	PQL	ug/Kg	J	FD
BENZO(A)PYRENE	340		3.6	MDL	8.9	PQL	ug/Kg	J	FD
BENZO(B)FLUORANTHENE	570		3.6	MDL	8.9	PQL	ug/Kg	J	FD
BENZO(G,H,I)PERYLENE	87		3.6	MDL	8.9	PQL	ug/Kg	J	FD
BENZO(K)FLUORANTHENE	320		3.6	MDL	8.9	PQL	ug/Kg	J	FD
CHRYSENE	480		1.8	MDL	8.9	PQL	ug/Kg	J	FD
DIBENZO(A,H)ANTHRACENE	43		3.6	MDL	8.9	PQL	ug/Kg	J	FD
FLUORANTHENE	1000		3.6	MDL	8.9	PQL	ug/Kg	J	FD
FLUORENE	41		3.6	MDL	8.9	PQL	ug/Kg	J	FD
INDENO(1,2,3-CD)PYRENE	120		3.6	MDL	8.9	PQL	ug/Kg	J	FD
NAPHTHALENE	7.6	J	3.6	MDL	8.9	PQL	ug/Kg	J	Z, FD
PHENANTHRENE	630		3.6	MDL	8.9	PQL	ug/Kg	J	FD
PYRENE	630		3.6	MDL	8.9	PQL	ug/Kg	J	FD

Sample ID: SL-098-SA8N-SS-0.0-0.5 *Collected:* 4/20/2011 12:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	0.43	J	0.40	MDL	2.0	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory:** LL

EDD Filename: PrepDE132_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: SL-098-SA8N-SS-0.0-0.5 ***Collected:*** 4/20/2011 12:45:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	1.5	J	0.80	MDL	2.0	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.2	J	0.80	MDL	2.0	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	1.1	J	0.80	MDL	2.0	PQL	ug/Kg	J	Z
CHRYSENE	1.6	J	0.40	MDL	2.0	PQL	ug/Kg	J	Z
FLUORANTHENE	1.2	J	0.80	MDL	2.0	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.0	J	0.80	MDL	2.0	PQL	ug/Kg	J	Z
PYRENE	0.93	J	0.80	MDL	2.0	PQL	ug/Kg	J	Z

Sample ID: SL-101-SA8N-SS-0.0-0.5 ***Collected:*** 4/20/2011 1:10:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	0.46	J	0.39	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-102-SA8N-SS-0.0-0.5 ***Collected:*** 4/20/2011 1:30:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	1.5	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.4	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
Di-n-octylphthalate	17	J	6.9	MDL	21	PQL	ug/Kg	J	Z
FLUORENE	0.87	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.2	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
NAPHTHALENE	1.1	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-108-SA8N-SS-0.0-0.5 ***Collected:*** 4/20/2011 1:50:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHYLENE	1.9	J	1.7	MDL	8.4	PQL	ug/Kg	J	Z
ANTHRACENE	3.5	J	1.7	MDL	8.4	PQL	ug/Kg	J	Z

Sample ID: SL-120-SA8N-SS-0.0-0.5 ***Collected:*** 4/20/2011 10:05:00 ***Analysis Type:*** RES ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	3.5	U	3.5	MDL	8.9	PQL	ug/Kg	UJ	FD
2-METHYLNAPHTHALENE	3.5	U	3.5	MDL	8.9	PQL	ug/Kg	UJ	FD
ACENAPHTHENE	3.5	U	3.5	MDL	8.9	PQL	ug/Kg	UJ	FD

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory:** LL

EDD Filename: PrepDE132_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: SL-120-SA8N-SS-0.0-0.5 ***Collected:*** 4/20/2011 10:05:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	1.8	U	1.8	MDL	8.9	PQL	ug/Kg	UJ	FD
BENZO(A)ANTHRACENE	3.5	U	3.5	MDL	8.9	PQL	ug/Kg	UJ	FD
BENZO(A)PYRENE	3.6	J	3.5	MDL	8.9	PQL	ug/Kg	J	Z, FD
BENZO(B)FLUORANTHENE	8.1	J	3.5	MDL	8.9	PQL	ug/Kg	J	Z, Q, FD
BENZO(G,H,I)PERYLENE	4.2	J	3.5	MDL	8.9	PQL	ug/Kg	J	Z, FD
BENZO(K)FLUORANTHENE	3.5	U	3.5	MDL	8.9	PQL	ug/Kg	UJ	FD
CHRYSENE	6.9	J	1.8	MDL	8.9	PQL	ug/Kg	J	Z, FD
DIBENZO(A,H)ANTHRACENE	3.5	U	3.5	MDL	8.9	PQL	ug/Kg	UJ	FD
FLUORANTHENE	9.5		3.5	MDL	8.9	PQL	ug/Kg	J	FD
FLUORENE	3.5	U	3.5	MDL	8.9	PQL	ug/Kg	UJ	FD
INDENO(1,2,3-CD)PYRENE	3.5	U	3.5	MDL	8.9	PQL	ug/Kg	UJ	FD
NAPHTHALENE	3.5	U	3.5	MDL	8.9	PQL	ug/Kg	UJ	FD
PHENANTHRENE	5.4	J	3.5	MDL	8.9	PQL	ug/Kg	J	Z, FD
PYRENE	6.6	J	3.5	MDL	8.9	PQL	ug/Kg	J	Z, Q, FD

Sample ID: SL-127-SA8N-SS-0.0-0.5 ***Collected:*** 4/20/2011 9:10:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	3.8	J	3.5	MDL	8.9	PQL	ug/Kg	J	Z
CHRYSENE	3.1	J	1.8	MDL	8.9	PQL	ug/Kg	J	Z

Sample ID: SL-128-SA8N-SS-0.0-0.5 ***Collected:*** 4/20/2011 8:55:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	0.91	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	1.0	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.1	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	0.87	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z
PHENANTHRENE	1.2	J	0.79	MDL	2.0	PQL	ug/Kg	J	Z

Sample ID: SL-129-SA8N-SS-0.0-0.5 ***Collected:*** 4/20/2011 8:35:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	0.40	J	0.36	MDL	1.8	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: PrepDE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **VOA**

Method: **8015B** ***Matrix:*** **SO**

Sample ID: **SL-108-SA8N-SS-0.0-0.5** ***Collected:*** **4/20/2011 1:50:00** ***Analysis Type:*** **REA3** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
p-Terphenyl	3.0	J	3.0	MDL	7.1	PQL	mg/Kg	J	Z

Sample ID: **SL-108-SA8N-SS-0.0-0.5** ***Collected:*** **4/20/2011 1:50:00** ***Analysis Type:*** **REA4** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
Isopropanol	340	J	100	MDL	510	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: PrepDE132_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: PrepDE132_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: PrepDE132_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE132

Method Blank Outlier Report

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: DE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11748AB221924	4/29/2011 7:24:00 PM	BORON	0.0156 mg/L	EB07-SA8N-SS-042011

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
EB07-SA8N-SS-042011(REA)	BORON	0.0199 mg/L	0.0199U mg/L

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11608FB221532	5/3/2011 3:32:00 PM	LITHIUM PHOSPHORUS TIN	0.27 mg/Kg 1.20 mg/Kg 1.37 mg/Kg	DUP05-SA8N-QC-042011 SL-098-SA8N-SS-0.0-0.5 SL-101-SA8N-SS-0.0-0.5 SL-102-SA8N-SS-0.0-0.5 SL-108-SA8N-SS-0.0-0.5 SL-120-SA8N-SS-0.0-0.5 SL-127-SA8N-SS-0.0-0.5 SL-128-SA8N-SS-0.0-0.5 SL-129-SA8N-SS-0.0-0.5 SL-136-SA8N-SS-0.0-0.5 SL-137-SA8N-SS-0.0-0.5

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP05-SA8N-QC-042011(RES)	TIN	2.72 mg/Kg	2.72U mg/Kg
SL-098-SA8N-SS-0.0-0.5(RES)	TIN	2.80 mg/Kg	2.80U mg/Kg
SL-101-SA8N-SS-0.0-0.5(RES)	TIN	2.82 mg/Kg	2.82U mg/Kg
SL-102-SA8N-SS-0.0-0.5(RES)	TIN	2.66 mg/Kg	2.66U mg/Kg
SL-108-SA8N-SS-0.0-0.5(RES)	TIN	5.98 mg/Kg	5.98U mg/Kg
SL-120-SA8N-SS-0.0-0.5(RES)	TIN	2.81 mg/Kg	2.81U mg/Kg
SL-127-SA8N-SS-0.0-0.5(RES)	TIN	2.57 mg/Kg	2.57U mg/Kg
SL-128-SA8N-SS-0.0-0.5(RES)	TIN	2.94 mg/Kg	2.94U mg/Kg
SL-129-SA8N-SS-0.0-0.5(RES)	TIN	2.67 mg/Kg	2.67U mg/Kg
SL-136-SA8N-SS-0.0-0.5(RES)	TIN	3.20 mg/Kg	3.20U mg/Kg
SL-137-SA8N-SS-0.0-0.5(RES)	TIN	2.43 mg/Kg	2.43U mg/Kg

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P12326AB221311A	5/5/2011 1:11:00 PM	COPPER VANADIUM	0.142 mg/Kg 0.0876 mg/Kg	SL-108-SA8N-SS-0.0-0.5

Method Blank Outlier Report

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: DE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: DE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8330A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-120-SA8N-SS-0.0-0.5MS SL-120-SA8N-SS-0.0-0.5MSD (SL-120-SA8N-SS-0.0-0.5)	PETN	125	124	80.00-121.00	-	PETN	J (all detects)

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-120-SA8N-SS-0.0-0.5MS SL-120-SA8N-SS-0.0-0.5MSD (SL-120-SA8N-SS-0.0-0.5)	EFH (C15-C20)	237	350	49.00-123.00	38 (20.00)	EFH (C15-C20)	J(all detects)
SL-120-SA8N-SS-0.0-0.5MS SL-120-SA8N-SS-0.0-0.5MSD (SL-120-SA8N-SS-0.0-0.5)	EFH (C21-C30) EFH (C30-C40)	-12 -1388	- -1500	49.00-123.00 49.00-123.00	- -	EFH (C21-C30) EFH (C30-C40)	No Qual, >4x

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-120-SA8N-SS-0.0-0.5MS SL-120-SA8N-SS-0.0-0.5MSD (DUP05-SA8N-QC-042011 SL-098-SA8N-SS-0.0-0.5 SL-101-SA8N-SS-0.0-0.5 SL-102-SA8N-SS-0.0-0.5 SL-108-SA8N-SS-0.0-0.5 SL-120-SA8N-SS-0.0-0.5 SL-127-SA8N-SS-0.0-0.5 SL-128-SA8N-SS-0.0-0.5 SL-129-SA8N-SS-0.0-0.5 SL-136-SA8N-SS-0.0-0.5 SL-137-SA8N-SS-0.0-0.5)	CALCIUM TITANIUM	877 234	1377 -	75.00-125.00 75.00-125.00	- -	CALCIUM TITANIUM	No Qual, >4x
SL-120-SA8N-SS-0.0-0.5MS SL-120-SA8N-SS-0.0-0.5MSD (DUP05-SA8N-QC-042011 SL-098-SA8N-SS-0.0-0.5 SL-101-SA8N-SS-0.0-0.5 SL-102-SA8N-SS-0.0-0.5 SL-108-SA8N-SS-0.0-0.5 SL-120-SA8N-SS-0.0-0.5 SL-127-SA8N-SS-0.0-0.5 SL-128-SA8N-SS-0.0-0.5 SL-129-SA8N-SS-0.0-0.5 SL-136-SA8N-SS-0.0-0.5 SL-137-SA8N-SS-0.0-0.5)	ALUMINUM IRON MAGNESIUM MANGANESE PHOSPHORUS POTASSIUM	472 -1469 -292 127 - 32	-69 -4441 -602 -77 -8 -16	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - 28 (20.00) 24 (20.00) -	ALUMINUM IRON MAGNESIUM MANGANESE PHOSPHORUS POTASSIUM	J(all detects) UJ(all non-detects) No Qual based on %R, >4x

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: DE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7471A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-120-SA8N-SS-0.0-0.5MS (DUP05-SA8N-QC-042011 SL-098-SA8N-SS-0.0-0.5 SL-101-SA8N-SS-0.0-0.5 SL-102-SA8N-SS-0.0-0.5 SL-108-SA8N-SS-0.0-0.5 SL-120-SA8N-SS-0.0-0.5 SL-127-SA8N-SS-0.0-0.5 SL-128-SA8N-SS-0.0-0.5 SL-129-SA8N-SS-0.0-0.5 SL-136-SA8N-SS-0.0-0.5 SL-137-SA8N-SS-0.0-0.5)	MERCURY	139	-	65.00-135.00	-	MERCURY	J(all detects)

Method: 8270C SIM
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-120-SA8N-SS-0.0-0.5MS	BENZO(B)FLUORANTHENE	-	-	43.00-155.00	41 (30.00)	BENZO(B)FLUORANTHENE	
SL-120-SA8N-SS-0.0-0.5MSD	BIS(2-ETHYLHEXYL)PHTHALAT	400	-	39.00-167.00	93 (30.00)	BIS(2-ETHYLHEXYL)PHTHALA	J(all detects)
(SL-120-SA8N-SS-0.0-0.5)	Di-n-octylphthalate	216	216	40.00-192.00	-	Di-n-octylphthalate	
	PYRENE	-	-	15.00-153.00	33 (30.00)	PYRENE	
SL-120-SA8N-SS-0.0-0.5MS	Butylbenzylphthalate	0	-	57.00-173.00	200 (30.00)	Butylbenzylphthalate	
SL-120-SA8N-SS-0.0-0.5MSD	Diethylphthalate	0	0	70.00-136.00	-	Diethylphthalate	J(all detects)
(SL-120-SA8N-SS-0.0-0.5)	Dimethylphthalate	0	-	74.00-118.00	200 (30.00)	Dimethylphthalate	R(all non-detects)
	Di-n-butylphthalate	0	-	65.00-148.00	200 (30.00)	Di-n-butylphthalate	

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-120-SA8N-SS-0.0-0.5MS	ARSENIC	-	176	75.00-125.00	-	ARSENIC	
SL-120-SA8N-SS-0.0-0.5MSD	BERYLLIUM	-	133	75.00-125.00	-	BERYLLIUM	
(DUP05-SA8N-QC-042011	CADMIUM	-	127	75.00-125.00	-	CADMIUM	
SL-098-SA8N-SS-0.0-0.5	COBALT	-	130	75.00-125.00	-	COBALT	
SL-101-SA8N-SS-0.0-0.5	COPPER	127	140	75.00-125.00	-	COPPER	
SL-102-SA8N-SS-0.0-0.5	LEAD	211	281	75.00-125.00	-	LEAD	
SL-120-SA8N-SS-0.0-0.5	NICKEL	144	144	75.00-125.00	-	NICKEL	J(all detects)
SL-127-SA8N-SS-0.0-0.5	SILVER	-	127	75.00-125.00	-	SILVER	Pb, V, Zn No
SL-128-SA8N-SS-0.0-0.5	VANADIUM	-	133	75.00-125.00	-	VANADIUM	Qual, >4x
SL-129-SA8N-SS-0.0-0.5	ZINC	183	249	75.00-125.00	-	ZINC	
SL-136-SA8N-SS-0.0-0.5							
SL-137-SA8N-SS-0.0-0.5)							
SL-120-SA8N-SS-0.0-0.5MS	ANTIMONY	39	39	75.00-125.00	-	ANTIMONY	
SL-120-SA8N-SS-0.0-0.5MSD							
(DUP05-SA8N-QC-042011							
SL-098-SA8N-SS-0.0-0.5							
SL-101-SA8N-SS-0.0-0.5							
SL-102-SA8N-SS-0.0-0.5							J(all detects)
SL-120-SA8N-SS-0.0-0.5							UJ(all non-detects)
SL-127-SA8N-SS-0.0-0.5							
SL-128-SA8N-SS-0.0-0.5							
SL-129-SA8N-SS-0.0-0.5							
SL-136-SA8N-SS-0.0-0.5							
SL-137-SA8N-SS-0.0-0.5)							

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: DE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-120-SA8N-SS-0.0-0.5MS SL-120-SA8N-SS-0.0-0.5MSD (DUP05-SA8N-QC-042011 SL -098-SA8N-SS-0.0-0.5 SL -101-SA8N-SS-0.0-0.5 SL -102-SA8N-SS-0.0-0.5 SL -120-SA8N-SS-0.0-0.5 SL -127-SA8N-SS-0.0-0.5 SL -128-SA8N-SS-0.0-0.5 SL -129-SA8N-SS-0.0-0.5 SL -136-SA8N-SS-0.0-0.5 SL -137-SA8N-SS-0.0-0.5)	BARIUM	142	380	75.00-125.00	-	BARIUM	No Qual, >4x

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-120-SA8N-SS-0.0-0.5MSD (SL-120-SA8N-SS-0.0-0.5)	2,4-DINITROPHENOL 3,3'-DICHLOROBENZIDINE 4,6-DINITRO-2-METHYLPHENOL 4-CHLOROANILINE	- - - -	- - - -	20.00-143.00 16.00-119.00 24.00-116.00 23.00-95.00	45 (30.00) 40 (30.00) 35 (30.00) 35 (30.00)	2,4-DINITROPHENOL 3,3'-DICHLOROBENZIDINE 4,6-DINITRO-2-METHYLPHEN 4-CHLOROANILINE	J(all detects)
SL-120-SA8N-SS-0.0-0.5MS SL-120-SA8N-SS-0.0-0.5MSD (SL-120-SA8N-SS-0.0-0.5)	BENZIDINE	0	0	35.00-141.00	-	BENZIDINE	J(all detects) R(all non-detects)

Method: 1625C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-120-SA8N-SS-0.0-0.5MS SL-120-SA8N-SS-0.0-0.5MSD (SL-120-SA8N-SS-0.0-0.5)	N-NITROSODIMETHYLAMINE	67	67	70.00-130.00	-	N-NITROSODIMETHYLAMINE	J(all detects) UJ(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: DE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-120-SA8N-SS-0.0-0.5DUP	POTASSIUM	23	20.00	
(DUP05-SA8N-QC-042011	SODIUM	21	20.00	
SL-098-SA8N-SS-0.0-0.5	Zirconium	200	20.00	
SL-101-SA8N-SS-0.0-0.5				
SL-102-SA8N-SS-0.0-0.5				
SL-108-SA8N-SS-0.0-0.5				J (all detects)
SL-120-SA8N-SS-0.0-0.5				UJ (all non-detects)
SL-127-SA8N-SS-0.0-0.5				Na, Zr No Qual, OK
SL-128-SA8N-SS-0.0-0.5				by difference
SL-129-SA8N-SS-0.0-0.5				
SL-136-SA8N-SS-0.0-0.5				
SL-137-SA8N-SS-0.0-0.5)				

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-120-SA8N-SS-0.0-0.5DUP	ANTIMONY	61	20.00	
(DUP05-SA8N-QC-042011	ARSENIC	23	20.00	
SL-098-SA8N-SS-0.0-0.5	BARIUM	23	20.00	
SL-101-SA8N-SS-0.0-0.5	CADMIUM	53	20.00	
SL-102-SA8N-SS-0.0-0.5	CHROMIUM	22	20.00	
SL-120-SA8N-SS-0.0-0.5	COBALT	24	20.00	J(all detects)
SL-127-SA8N-SS-0.0-0.5	LEAD	32	20.00	UJ(all non-detects)
SL-128-SA8N-SS-0.0-0.5	MOLYBDENUM	22	20.00	Sb, Cd, Mo, Ag No
SL-129-SA8N-SS-0.0-0.5	NICKEL	24	20.00	Qual, OK by
SL-136-SA8N-SS-0.0-0.5	SILVER	40	20.00	difference
SL-137-SA8N-SS-0.0-0.5)				

Method: 7471A
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-120-SA8N-SS-0.0-0.5DUP	MERCURY	29	20.00	
(DUP05-SA8N-QC-042011				
SL-098-SA8N-SS-0.0-0.5				
SL-101-SA8N-SS-0.0-0.5				
SL-102-SA8N-SS-0.0-0.5				
SL-108-SA8N-SS-0.0-0.5				
SL-120-SA8N-SS-0.0-0.5				No Qual, OK by
SL-127-SA8N-SS-0.0-0.5				difference
SL-128-SA8N-SS-0.0-0.5				
SL-129-SA8N-SS-0.0-0.5				
SL-136-SA8N-SS-0.0-0.5				
SL-137-SA8N-SS-0.0-0.5)				

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: DE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8082
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11114AQ242158A P11114AY242139A (EB07-SA8N-SS-042011)	Aroclor 5442	92	96	35.00-84.00	-	Aroclor 5432 Aroclor 5442 Aroclor 5460	J (all detects)

Method: 8270C
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P2WJLCSY261109 (EB07-SA8N-SS-042011)	BENZOIC ACID	-	-	10.00-69.00	31 (30.00)	BENZOIC ACID	J(all detects) UJ(all non-detects)

Method: 8270C SIM
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P2WKLCSQ260855 P2WKLCSY260927 (EB07-SA8N-SS-042011)	2-METHYLNAPHTHALENE	73	71	75.00-115.00	-	2-METHYLNAPHTHALENE	J(all detects) UJ(all non-detects)

Method: 7470A
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11813EY220701 (EB07-SA8N-SS-042011)	MERCURY	-	87	90.00-115.00	-	MERCURY	J(all detects) UJ(all non-detects)

Method: 8330A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11184AQ240252A (DUP05-SA8N-QC-042011 SL-101-SA8N-SS-0.0-0.5 SL-102-SA8N-SS-0.0-0.5 SL-108-SA8N-SS-0.0-0.5 SL-120-SA8N-SS-0.0-0.5)	PETN	124	-	80.00-120.00	-	PETN	J(all detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: DE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6020**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*LCS %R*	*LCSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
P11826BQ220942C (DUP05-SA8N-QC-042011 SL-098-SA8N-SS-0.0-0.5 SL-101-SA8N-SS-0.0-0.5 SL-102-SA8N-SS-0.0-0.5 SL-120-SA8N-SS-0.0-0.5 SL-127-SA8N-SS-0.0-0.5 SL-128-SA8N-SS-0.0-0.5 SL-129-SA8N-SS-0.0-0.5 SL-136-SA8N-SS-0.0-0.5 SL-137-SA8N-SS-0.0-0.5)	MOLYBDENUM	122	-	80.00-120.00	-	MOLYBDENUM	No Qual, SRM within QC limits

Surrogate Outlier Report

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: DE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1625C**
Matrix: **SO**

Sample ID	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-101-SA8N-SS-0.0-0.5	N-Nitrosodimethylamine-d6	174	50.00-150.00	All Target Analytes	No Qual, Diluted Out
SL-108-SA8N-SS-0.0-0.5	N-Nitrosodimethylamine-d6	200	50.00-150.00	All Target Analytes	No Qual, Diluted Out

Method: **8015M**
Matrix: **SO**

Sample ID	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-108-SA8N-SS-0.0-0.5	TETRAMETHYLENE GLYCOL	160	29.00-137.00	All Target Analytes	J(all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: DE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-120-SA8N-SS-0.0-0.5	DUP05-SA8N-QC-042011			
MOISTURE	6.1	6.7	9		No Qualifiers Applied

Method: 1625C
Matrix: SO

Analyte	Concentration (ng/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-120-SA8N-SS-0.0-0.5	DUP05-SA8N-QC-042011			
N-NITROSODIMETHYLAMINE	149	58.8	87	50.00	J(all detects)

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-120-SA8N-SS-0.0-0.5	DUP05-SA8N-QC-042011			
FLUORIDE	1.6	1.3	21	50.00	No Qualifiers Applied
Nitrate-NO3	3.6	2.8	25	50.00	

Method: 6010B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-120-SA8N-SS-0.0-0.5	DUP05-SA8N-QC-042011			
ALUMINUM	24500	23600	4	50.00	
BORON	9.27	10.6	13	50.00	
CALCIUM	6510	6500	0	50.00	
IRON	26600	25400	5	50.00	
LITHIUM	26.1	24.7	6	50.00	
MAGNESIUM	6290	5280	17	50.00	
MANGANESE	371	322	14	50.00	No Qualifiers Applied
PHOSPHORUS	467	463	1	50.00	
POTASSIUM	4980	4010	22	50.00	
SODIUM	120	94.9	23	50.00	
STRONTIUM	32.7	32.9	1	50.00	
TIN	2.81	2.72	3	50.00	
TITANIUM	1270	1260	1	50.00	

Field Duplicate RPD Report

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: DE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

Analyte	Concentration (mg/Kg) SL-120-SA8N-SS-0.0-0.5	Concentration (mg/Kg) DUP05-SA8N-QC-042011	Sample RPD	eQAPP RPD	Flag
ANTIMONY	0.308	0.216	35	50.00	No Qualifiers Applied
ARSENIC	6.25	5.86	6	50.00	
BARIUM	129	113	13	50.00	
BERYLLIUM	0.758	0.658	14	50.00	
CADMIUM	0.466	0.438	6	50.00	
CHROMIUM	28.3	24.0	16	50.00	
COBALT	9.63	12.6	27	50.00	
COPPER	17.8	17.0	5	50.00	
LEAD	20.4	20.8	2	50.00	
MOLYBDENUM	0.603	0.679	12	50.00	
NICKEL	18.3	16.6	10	50.00	
SELENIUM	0.165	0.193	16	50.00	
SILVER	0.0736	0.106	36	50.00	
THALLIUM	0.324	0.310	4	50.00	
VANADIUM	50.4	44.0	14	50.00	
ZINC	121	118	3	50.00	

Method: 7199
Matrix: SO

Analyte	Concentration (mg/Kg) SL-120-SA8N-SS-0.0-0.5	Concentration (mg/Kg) DUP05-SA8N-QC-042011	Sample RPD	eQAPP RPD	Flag
HEXAVALENT CHROMIUM	0.89	0.91	2	50.00	No Qualifiers Applied

Method: 7471A
Matrix: SO

Analyte	Concentration (mg/Kg) SL-120-SA8N-SS-0.0-0.5	Concentration (mg/Kg) DUP05-SA8N-QC-042011	Sample RPD	eQAPP RPD	Flag
MERCURY	0.0277	0.0556	67	50.00	J(all detects)

Method: 8015M
Matrix: SO

Analyte	Concentration (mg/Kg) SL-120-SA8N-SS-0.0-0.5	Concentration (mg/Kg) DUP05-SA8N-QC-042011	Sample RPD	eQAPP RPD	Flag
EFH (C21-C30)	48	62	25	50.00	No Qualifiers Applied
EFH (C30-C40)	200	240	18	50.00	

Method: 8082
Matrix: SO

Analyte	Concentration (ug/Kg) SL-120-SA8N-SS-0.0-0.5	Concentration (ug/Kg) DUP05-SA8N-QC-042011	Sample RPD	eQAPP RPD	Flag
AROCLOR 1254	56	75	29	50.00	No Qualifiers Applied
AROCLOR 1260	17	21	21	50.00	

Field Duplicate RPD Report

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: DE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-120-SA8N-SS-0.0-0.5	DUP05-SA8N-QC-042011			
1-METHYLNAPHTHALENE	8.9 U	3.8	200	50.00	
2-METHYLNAPHTHALENE	8.9 U	6.0	200	50.00	
ACENAPHTHENE	8.9 U	37	200	50.00	
ANTHRACENE	8.9 U	89	200	50.00	
BENZO(A)ANTHRACENE	8.9 U	390	200	50.00	
BENZO(A)PYRENE	3.6	340	196	50.00	
BENZO(B)FLUORANTHENE	8.1	570	194	50.00	
BENZO(G,H,I)PERYLENE	4.2	87	182	50.00	
BENZO(K)FLUORANTHENE	8.9 U	320	200	50.00	J(all detects) UJ(all non-detects)
CHRYSENE	6.9	480	194	50.00	
DIBENZO(A,H)ANTHRACENE	8.9 U	43	200	50.00	
FLUORANTHENE	9.5	1000	196	50.00	
FLUORENE	8.9 U	41	200	50.00	
INDENO(1,2,3-CD)PYRENE	8.9 U	120	200	50.00	
NAPHTHALENE	8.9 U	7.6	200	50.00	
PHENANTHRENE	5.4	630	197	50.00	
PYRENE	6.6	630	196	50.00	

Method: 8270C
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-120-SA8N-SS-0.0-0.5	DUP05-SA8N-QC-042011			
BIS(2-ETHYLHEXYL)PHTHALATE	28	40	35	50.00	No Qualifiers Applied
Di-n-butylphthalate	180 U	38	200	50.00	J(all detects) UJ(all non-detects)

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-120-SA8N-SS-0.0-0.5	DUP05-SA8N-QC-042011			
PH	7.80	7.00	11	50.00	No Qualifiers Applied

Method: ASTM D1498
Matrix: SO

Analyte	Concentration (mV)		Sample RPD	eQAPP RPD	Flag
	SL-120-SA8N-SS-0.0-0.5	DUP05-SA8N-QC-042011			
Oxidation Reduction Potential	449	411	9		No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: DE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB07-SA8N-SS-042011	BORON	J	0.0199	0.0500	PQL	mg/L	J (all detects)
	CALCIUM	J	0.0800	0.200	PQL	mg/L	

Method: 8270C SIM

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB07-SA8N-SS-042011	BIS(2-ETHYLHEXYL)PHTHALATE	J	0.16	0.99	PQL	ug/L	J (all detects)
	Diethylphthalate	J	0.074	0.99	PQL	ug/L	
	Di-n-butylphthalate	J	0.31	0.99	PQL	ug/L	
	NAPHTHALENE	J	0.033	0.050	PQL	ug/L	

Method: 1625C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-108-SA8N-SS-0.0-0.5	N-NITROSODIMETHYLAMINE	J	616	674	PQL	ng/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP05-SA8N-QC-042011	SODIUM	J	94.9	107	PQL	mg/Kg	J (all detects)
	TIN	J	2.72	10.7	PQL	mg/Kg	
SL-098-SA8N-SS-0.0-0.5	SODIUM	J	101	116	PQL	mg/Kg	J (all detects)
	TIN	J	2.80	11.6	PQL	mg/Kg	
	Zirconium	J	0.979	5.80	PQL	mg/Kg	
SL-101-SA8N-SS-0.0-0.5	SODIUM	J	86.1	116	PQL	mg/Kg	J (all detects)
	TIN	J	2.82	11.6	PQL	mg/Kg	
SL-102-SA8N-SS-0.0-0.5	BORON	J	5.46	5.73	PQL	mg/Kg	J (all detects)
	SODIUM	J	85.9	115	PQL	mg/Kg	
	TIN	J	2.66	11.5	PQL	mg/Kg	
SL-108-SA8N-SS-0.0-0.5	TIN	J	5.98	10.1	PQL	mg/Kg	J (all detects)
SL-120-SA8N-SS-0.0-0.5	TIN	J	2.81	10.2	PQL	mg/Kg	J (all detects)
SL-127-SA8N-SS-0.0-0.5	TIN	J	2.57	10.5	PQL	mg/Kg	J (all detects)
SL-128-SA8N-SS-0.0-0.5	SODIUM	J	107	117	PQL	mg/Kg	J (all detects)
	TIN	J	2.94	11.7	PQL	mg/Kg	
SL-129-SA8N-SS-0.0-0.5	TIN	J	2.67	10.7	PQL	mg/Kg	J (all detects)
SL-136-SA8N-SS-0.0-0.5	BORON	J	5.67	5.76	PQL	mg/Kg	J (all detects)
	SODIUM	J	108	115	PQL	mg/Kg	
	TIN	J	3.20	11.5	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: DE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-137-SA8N-SS-0.0-0.5	TIN	J	2.43	10.0	PQL	mg/Kg	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP05-SA8N-QC-042011	SELENIUM	J	0.193	0.416	PQL	mg/Kg	J (all detects)
SL-098-SA8N-SS-0.0-0.5	ANTIMONY	J	0.175	0.234	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.139	0.468	PQL	mg/Kg	
	SILVER	J	0.0280	0.117	PQL	mg/Kg	
SL-101-SA8N-SS-0.0-0.5	ANTIMONY	J	0.142	0.227	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.127	0.453	PQL	mg/Kg	
	SILVER	J	0.0376	0.113	PQL	mg/Kg	
SL-102-SA8N-SS-0.0-0.5	ANTIMONY	J	0.224	0.231	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.145	0.463	PQL	mg/Kg	
	SILVER	J	0.0460	0.116	PQL	mg/Kg	
SL-108-SA8N-SS-0.0-0.5	SELENIUM	J	0.279	0.397	PQL	mg/Kg	J (all detects)
SL-120-SA8N-SS-0.0-0.5	SELENIUM	J	0.165	0.414	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0736	0.103	PQL	mg/Kg	
SL-127-SA8N-SS-0.0-0.5	ANTIMONY	J	0.206	0.210	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.186	0.420	PQL	mg/Kg	
	SILVER	J	0.0470	0.105	PQL	mg/Kg	
SL-128-SA8N-SS-0.0-0.5	ANTIMONY	J	0.109	0.238	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.167	0.476	PQL	mg/Kg	
	SILVER	J	0.0511	0.119	PQL	mg/Kg	
SL-129-SA8N-SS-0.0-0.5	ANTIMONY	J	0.129	0.210	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.149	0.420	PQL	mg/Kg	
	SILVER	J	0.0305	0.105	PQL	mg/Kg	
SL-136-SA8N-SS-0.0-0.5	ANTIMONY	J	0.108	0.233	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.143	0.465	PQL	mg/Kg	
	SILVER	J	0.0360	0.116	PQL	mg/Kg	
SL-137-SA8N-SS-0.0-0.5	ANTIMONY	J	0.105	0.202	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.106	0.405	PQL	mg/Kg	
	SILVER	J	0.0667	0.101	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP05-SA8N-QC-042011	HEXAVALENT CHROMIUM	J	0.91	1.1	PQL	mg/Kg	J (all detects)
SL-098-SA8N-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.70	1.2	PQL	mg/Kg	J (all detects)
SL-101-SA8N-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	1.1	1.2	PQL	mg/Kg	J (all detects)
SL-102-SA8N-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.50	1.2	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: DE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-120-SA8N-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.89	1.1	PQL	mg/Kg	J (all detects)
SL-127-SA8N-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.57	1.1	PQL	mg/Kg	J (all detects)
SL-128-SA8N-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.43	1.2	PQL	mg/Kg	J (all detects)
SL-129-SA8N-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.44	1.1	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP05-SA8N-QC-042011	MERCURY	J	0.0556	0.0992	PQL	mg/Kg	J (all detects)
SL-102-SA8N-SS-0.0-0.5	MERCURY	J	0.0058	0.112	PQL	mg/Kg	J (all detects)
SL-108-SA8N-SS-0.0-0.5	MERCURY	J	0.0294	0.0934	PQL	mg/Kg	J (all detects)
SL-120-SA8N-SS-0.0-0.5	MERCURY	J	0.0277	0.102	PQL	mg/Kg	J (all detects)
SL-127-SA8N-SS-0.0-0.5	MERCURY	J	0.0188	0.102	PQL	mg/Kg	J (all detects)
SL-128-SA8N-SS-0.0-0.5	MERCURY	J	0.0148	0.115	PQL	mg/Kg	J (all detects)
SL-129-SA8N-SS-0.0-0.5	MERCURY	J	0.0049	0.100	PQL	mg/Kg	J (all detects)
SL-136-SA8N-SS-0.0-0.5	MERCURY	J	0.0093	0.111	PQL	mg/Kg	J (all detects)

Method: 8015B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-108-SA8N-SS-0.0-0.5	Isopropanol p-Terphenyl	J J	340 3.0	510 7.1	PQL PQL	ug/Kg mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-101-SA8N-SS-0.0-0.5	EFH (C15-C20)	J	1.1	1.4	PQL	mg/Kg	J (all detects)
SL-102-SA8N-SS-0.0-0.5	EFH (C15-C20)	J	2.4	6.9	PQL	mg/Kg	J (all detects)
SL-108-SA8N-SS-0.0-0.5	EFH (C15-C20)	J	61	120	PQL	mg/Kg	J (all detects)
SL-127-SA8N-SS-0.0-0.5	EFH (C15-C20)	J	1.1	1.3	PQL	mg/Kg	J (all detects)
SL-128-SA8N-SS-0.0-0.5	EFH (C15-C20)	J	1.0	2.9	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: DE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-098-SA8N-SS-0.0-0.5	AROCLOR 1254 AROCLOR 1260	J J	0.92 0.59	2.1 2.1	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-101-SA8N-SS-0.0-0.5	AROCLOR 1254 Aroclor 5460	J J	1.4 3.5	2.0 3.8	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-102-SA8N-SS-0.0-0.5	Aroclor 5460	J	3.3	3.8	PQL	ug/Kg	J (all detects)
SL-128-SA8N-SS-0.0-0.5	AROCLOR 1260	J	1.0	2.0	PQL	ug/Kg	J (all detects)
SL-136-SA8N-SS-0.0-0.5	Aroclor 5460	J	3.3	3.9	PQL	ug/Kg	J (all detects)
SL-137-SA8N-SS-0.0-0.5	AROCLOR 1260 Aroclor 5460	J J	8.1 9.4	8.8 17	PQL PQL	ug/Kg ug/Kg	J (all detects)

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP05-SA8N-QC-042011	BIS(2-ETHYLHEXYL)PHTHALATE Di-n-butylphthalate	J J	40 38	350 180	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-098-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	36	400	PQL	ug/Kg	J (all detects)
SL-101-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	43	390	PQL	ug/Kg	J (all detects)
SL-102-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	36	380	PQL	ug/Kg	J (all detects)
SL-108-SA8N-SS-0.0-0.5	BENZO(B)FLUORANTHENE BENZO(G,H,I)PERYLENE BIS(2-ETHYLHEXYL)PHTHALATE Di-n-butylphthalate FLUORANTHENE PYRENE	J J J J J J	100 98 520 110 110 100	840 840 1700 840 840 840	PQL PQL PQL PQL PQL PQL	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	J (all detects)
SL-120-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	28	350	PQL	ug/Kg	J (all detects)
SL-127-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE Butylbenzylphthalate	J J	39 20	350 180	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-128-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE Di-n-butylphthalate	J J	39 23	400 200	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-129-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	22	360	PQL	ug/Kg	J (all detects)
SL-136-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE CHRYSENE Di-n-butylphthalate PYRENE	J J J J	33 21 110 21	390 200 200 200	PQL PQL PQL PQL	ug/Kg ug/Kg ug/Kg ug/Kg	J (all detects)
SL-137-SA8N-SS-0.0-0.5	ACENAPHTHENE ANTHRACENE BIS(2-ETHYLHEXYL)PHTHALATE CARBAZOLE DIBENZO(A,H)ANTHRACENE INDENO(1,2,3-CD)PYRENE	J J J J J J	120 190 140 110 280 790	860 860 1700 860 860 860	PQL PQL PQL PQL PQL PQL	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE132 **Laboratory: LL**

EDD Filename: DE132_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8270C SIM**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP05-SA8N-QC-042011	1-METHYLNAPHTHALENE	J	3.8	8.9	PQL	ug/Kg	J (all detects)
	2-METHYLNAPHTHALENE	J	6.0	8.9	PQL	ug/Kg	
	NAPHTHALENE	J	7.6	8.9	PQL	ug/Kg	
SL-098-SA8N-SS-0.0-0.5	ANTHRACENE	J	0.43	2.0	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	1.5	2.0	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	1.2	2.0	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	1.1	2.0	PQL	ug/Kg	
	CHRYSENE	J	1.6	2.0	PQL	ug/Kg	
	FLUORANTHENE	J	1.2	2.0	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.0	2.0	PQL	ug/Kg	
	PYRENE	J	0.93	2.0	PQL	ug/Kg	
SL-101-SA8N-SS-0.0-0.5	CHRYSENE	J	0.46	1.9	PQL	ug/Kg	J (all detects)
SL-102-SA8N-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	1.5	1.9	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	1.4	1.9	PQL	ug/Kg	
	Di-n-octylphthalate	J	17	21	PQL	ug/Kg	
	FLUORENE	J	0.87	1.9	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.2	1.9	PQL	ug/Kg	
	NAPHTHALENE	J	1.1	1.9	PQL	ug/Kg	
SL-108-SA8N-SS-0.0-0.5	ACENAPHTHYLENE	J	1.9	8.4	PQL	ug/Kg	J (all detects)
	ANTHRACENE	J	3.5	8.4	PQL	ug/Kg	
SL-120-SA8N-SS-0.0-0.5	BENZO(A)PYRENE	J	3.6	8.9	PQL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	8.1	8.9	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	4.2	8.9	PQL	ug/Kg	
	CHRYSENE	J	6.9	8.9	PQL	ug/Kg	
	PHENANTHRENE	J	5.4	8.9	PQL	ug/Kg	
	PYRENE	J	6.6	8.9	PQL	ug/Kg	
SL-127-SA8N-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	3.8	8.9	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	3.1	8.9	PQL	ug/Kg	
SL-128-SA8N-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	0.91	2.0	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	1.0	2.0	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	1.1	2.0	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	0.87	2.0	PQL	ug/Kg	
	PHENANTHRENE	J	1.2	2.0	PQL	ug/Kg	
SL-129-SA8N-SS-0.0-0.5	CHRYSENE	J	0.40	1.8	PQL	ug/Kg	J (all detects)

LDC #: 26275A4 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/28/11

SDG #: DE132 ADR Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: MH

2nd Reviewer:

METHOD: Metals (EPA SW 846 Method 6010B/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 4/20/11
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	A	Not qual by ECB/CCBs
V.	ICP Interference Check Sample (ICS) Analysis	N	→ qual for RPD
VI.	Matrix Spike Analysis	N	Al, Ba, Ca, Fe, Pb, Mg, Mn, P, K, Ti, V, Zn >4X ← see below
VII.	Duplicate Sample Analysis	N	Sb, Cd, Hg, Mo, Ag, Na, Sr, <5X No qual for RPD
VIII.	Laboratory Control Samples (LCS)	N A	SRM, Difference OK
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	Ca, Cu, Pb, V, Zn J/nJ
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	SW	EB=12

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	SL-098-SA8N-SS-0.0-0.5	11	DUP05-SA8N-QC-042011	21		31	
2	SL-101-SA8N-SS-0.0-0.5	12	EB07-SA8N-SS-042011	22		32	
3	SL-102-SA8N-SS-0.0-0.5	13	SL-120-SA8N-SS-0.0-0.5MS	23		33	
4	SL-108-SA8N-SS-0.0-0.5	14	SL-120-SA8N-SS-0.0-0.5MSD	24		34	
5	SL-120-SA8N-SS-0.0-0.5	15	SL-120-SA8N-SS-0.0-0.5DUP	25		35	
6	SL-127-SA8N-SS-0.0-0.5	16		26		36	
7	SL-128-SA8N-SS-0.0-0.5	17		27		37	
8	SL-129-SA8N-SS-0.0-0.5	18		28		38	
9	SL-136-SA8N-SS-0.0-0.5	19		29		39	
10	SL-137-SA8N-SS-0.0-0.5	20		30		40	

Notes: * Sample #4 batched with DE140. (LDC# 26275E)

ICP-MS.

LDC #: 26275A4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: W
2nd Reviewer: SB

METHOD: Trace Metals (EPA SW846 6010B/7000)
(Y) N N/A Were field blanks identified in this SDG?
(Y) N N/A Were target analytes detected in the field blanks?
Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 4/20/11 Soil factor applied 100X
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All Soil

Analyte	Blank ID	Sample Identification											
	12	Action Level	1	2	3	4	5	6	7	8	9	10	
B	0.0199	9.95	8.0	8.3	5.5	6.7	9.3	6.4	6.2	6.1	5.7	6.5	
Ca	0.0800	40											

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Samples with analyte concentrations within five times the associated field blank concentration are listed above, these sample results were qualified as not detected, "U".

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: DE132
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6264819BKG Matrix Spike Lab Sample ID: 6264820MS Matrix Spike Duplicate Lab Sample ID: 6264821MSD
% Solids for Sample: 93.9
Batch Id(s): P11608F, P11826B, P11611F

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	Control Limit RPD	M
Aluminum		24542.1203		25528.4126		24400.4322		208.8162	206.7889	MG/KG	472		-69		5			20	P
Antimony	121	0.3083		0.8005		0.7850		1.2653	1.2288	MG/KG	39	N	39	N	2		75 - 125	20	MS
Arsenic	75	6.2471		8.5851		9.8468		2.1088	2.0480	MG/KG	111		176	N	14		75 - 125	20	MS
Barium	137	128.9122		143.8438		167.8545		10.5442	10.2400	MG/KG	142		380		15			20	MS
Beryllium	9	0.7583		1.7651		1.8459		0.8435	0.8192	MG/KG	119		133	N	4		75 - 125	20	MS
Boron		9.2682		215.2164		208.9995		208.8162	206.7889	MG/KG	99		97		3		84 - 115	20	P
Cadmium	111	0.4661		1.6622		1.7627		1.0544	1.0240	MG/KG	113		127	N	6		75 - 125	20	MS
Calcium		6513.7421		10176.9509		12210.7199		417.6324	413.5778	MG/KG	877		1377		18			20	P
Chromium	52	28.3094		39.3720		39.8132		10.5442	10.2400	MG/KG	105		112		1		75 - 125	20	MS
Cobalt	59	9.6260		72.6073		76.0424		52.7209	51.2001	MG/KG	119		130	N	5		75 - 125	20	MS
Copper	63	17.8479		31.1897		32.2151		10.5442	10.2400	MG/KG	127	N	140	N	3		75 - 125	20	MS
Iron		26553.6997		25019.4230		21961.8495		104.4081	103.3944	MG/KG	-1469		-4441		13			20	P
Lead	208	20.4163		27.0986		29.0612		3.1633	3.0720	MG/KG	211		281		7			20	MS
Lithium		26.0865		131.4790		126.6665		104.4081	103.3944	MG/KG	101		97		4		82 - 114	20	P
Magnesium		6291.6001		5681.8612		5047.5108		208.8162	206.7889	MG/KG	-292		-602		12			20	P
Manganese		371.0238		437.4606		331.2758		52.2041	51.6972	MG/KG	127		-77		28	*		20	P
Mercury		0.0277	B	0.2660		0.2504		0.1716	0.1703	MG/KG	139	N	131		6		65 - 135	20	CV
Molybdenum	98	0.6034		12.8196		12.8082		10.5442	10.2400	MG/KG	116		119		0		75 - 125	20	MS
Nickel	60	18.2801		33.4462		33.0138		10.5442	10.2400	MG/KG	144	N	144	N	1		75 - 125	20	MS
Phosphorus		466.6687		585.7076		458.2803		104.4081	103.3944	MG/KG	114		-8		24	*		20	P
Potassium		4976.9251		5309.2391		4806.5749		1044.0811	1033.9444	MG/KG	32		-16		10			20	P
Selenium	78	0.1650	B	2.5243		2.4658		2.1088	2.0480	MG/KG	112		112		2		75 - 125	20	MS
Silver	107	0.0736	B	12.7796		13.0683		10.5442	10.2400	MG/KG	121		127	N	2		75 - 125	20	MS
Sodium		120.4340		1221.0017		1186.8617		1044.0811	1033.9444	MG/KG	105		103		3		75 - 125	20	P
Strontium		32.6831		138.6863		134.5751		104.4081	103.3944	MG/KG	102		99		3		75 - 115	20	P
Thallium	203	0.3245		0.8056		0.8208		0.4218	0.4096	MG/KG	114		121		2		75 - 125	20	MS
Tin		2.8140	B	362.6135		355.1475		417.6324	413.5778	MG/KG	86		85		2		80 - 110	20	P
Titanium		1268.7352		1513.2212		1395.6533		104.4081	103.3944	MG/KG	234		123		8			20	P
Vanadium	51	50.3738		61.7257		64.0206		10.5442	10.2400	MG/KG	108		133		4			20	MS
Zinc	66	121.3851		140.7016		146.8829		10.5442	10.2400	MG/KG	183		249		4			20	MS
Zirconium		0.8602	U	92.6789		91.3014		104.4081	103.3944	MG/KG	89		88		1		75 - 125	20	P

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: DE132
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6264819BKG
% Solids for Duplicate: 93.1
Batch ID(s): P11608F, P11826B, P11611F
Concentration Units: MG/KG

Duplicate Lab Sample ID: 6264822DUP
% Solids for Sample: 93.9

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			24542.1203		23335.2226		5		P
Antimony	121	0.2	0.3083		0.1635	B	61		MS
Arsenic	75		6.2471		4.9684		23	*	MS
Barium	137		128.9122		102.2997		23	*	MS
Beryllium	9		0.7583		0.6312		18		MS
Boron		5.1	9.2682		9.0133		3		P
Cadmium	111	0.1	0.4661		0.2704		53	*	MS
Calcium			6513.7421		6160.9916		6		P
Chromium	52		28.3094		22.6700		22	*	MS
Cobalt	59		9.6260		7.5370		24	*	MS
Copper	63		17.8479		15.5885		14		MS
Iron			26553.6997		23937.5113		10		P
Lead	208		20.4163		14.7513		32	*	MS
Lithium			26.0865		24.7676		5		P
Magnesium			6291.6001		5196.4774		19		P
Manganese			371.0238		335.8575		10		P
Mercury			0.0277	B	0.0371	B	29		CV
Molybdenum	98	0.1	0.6034		0.4825		22	*	MS
Nickel	60		18.2801		14.3928		24	*	MS
Phosphorus			466.6687		409.0860		13		P
Potassium			4976.9251		3952.6214		23	*	P
Selenium	78		0.1650	B	0.1426	B	15		MS
Silver	107	0.1	0.0736	B	0.1104		40		MS
Sodium		102.4	120.4340		97.6284	B	21		P
Strontium			32.6831		31.7943		3		P
Thallium	203	0.1	0.3245		0.2708		18		MS
Tin			2.8140	B	2.6757	B	5		P
Titanium			1268.7352		1224.8648		4		P
Vanadium	51		50.3738		42.2822		17		MS
Zinc	66		121.3851		103.7126		16		MS
Zirconium			0.8602	U	1.4572	B	200		P

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

DE132 3792

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
* = Duplicate Out of Spec

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: DE132
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6264819BKG Serial Dilution Lab Sample ID: 6264819L
Batch ID(s): P11608F, P11826B
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		239668.5300		238922.4500		0		P
Antimony	121	1.4910		1.5000	U	100		MS
Arsenic	75	30.2100		33.7450		12		MS
Barium	137	623.4000		681.0000		9		MS
Beryllium	9	3.6670		4.1945		14		MS
Boron		90.5100		101.0000	B	12		P
Cadmium	111	2.2540		1.8810	B	17		MS
Calcium		63610.6000		66982.2000		5		P
Chromium	52	136.9000		157.1500		15	E	MS
Cobalt	59	46.5500		48.9600		5		MS
Copper	63	86.3100		97.5500		13	E	MS
Iron		259312.8100		270567.4500		4		P
Lead	208	98.7300		112.4000		14	E	MS
Lithium		254.7500		253.4500		1		P
Magnesium		61441.2500		63895.9000		4		P
Manganese		3623.2700		3951.0500		9		P
Molybdenum	98	2.9180		2.9095		0		MS
Nickel	60	88.4000		93.9500		6		MS
Phosphorus		4557.3000		4666.6000		2		P
Potassium		48602.6600		48340.4000		1		P
Selenium	78	0.7981	B	1.0000	U	100		MS
Silver	107	0.3558	B	0.4917	B	38		MS
Sodium		1176.1100		1865.0000	U	100		P
Strontium		319.1700		328.0000		3		P
Thallium	203	1.5690		1.8830	B	20		MS
Tin		27.4800	B	50.0000	U	100		P
Titanium		12389.9600		13161.7500		6		P
Vanadium	51	243.6000		283.4500		16	E	MS
Zinc	66	587.0000		665.0000		13	E	MS
Zirconium		8.4000	U	42.0000	U			P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

SAMPLE DELIVERY GROUP

DE134

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Apr-2011	TB-042111	6266027	TB	5030B	8260B	IV
21-Apr-2011	TB-042111	6266027	TB	5030B	8260B SIM	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5	6266014	N	3050B	6010B	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5	6266014	N	3050B	6020	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5	6266014	N	3060A	7199	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5	6266014	N	3546	1625C	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5	6266014	N	3550B	8015B	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5	6266014	N	3550B	8015M	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5	6266014	N	3550B	8082	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5	6266014	N	3550B	8270C	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5	6266014	N	3550B	8270C SIM	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5	6266014	N	8330	8330A	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5	6266014	N	METHOD	300.0	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5	6266014	N	METHOD	314.0	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5	6266014	N	METHOD	7471A	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5	6266014	N	METHOD	8015B	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5	6266014	N	METHOD	8015M	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5	6266014	N	METHOD	8315A	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5	6266014	N	METHOD	9012B	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MS	6266015	MS	3050B	6010B	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MS	6266015	MS	3050B	6020	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MS	6266015	MS	3060A	7199	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MS	6266015	MS	3550B	8082	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MS	6266015	MS	3550B	8270C	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MS	6266015	MS	3550B	8270C SIM	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MS	6266015	MS	METHOD	300.0	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MS	6266015	MS	METHOD	314.0	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MS	6266015	MS	METHOD	7471A	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MSD	6266016	MSD	3050B	6010B	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MSD	6266016	MSD	3050B	6020	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MSD	6266016	MSD	3550B	8082	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MSD	6266016	MSD	3550B	8270C	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MSD	6266016	MSD	3550B	8270C SIM	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MSD	6266016	MSD	METHOD	7471A	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5DUP	6266017	DUP	3050B	6010B	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5DUP	6266017	DUP	3050B	6020	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5DUP	6266017	DUP	3060A	7199	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5DUP	6266017	DUP	METHOD	300.0	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5DUP	6266017	DUP	METHOD	314.0	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5DUP	6266017	DUP	METHOD	7471A	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5DUP	P266014D270948B	DUP	METHOD	9012B	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MSD	P266014M240452A	MSD	METHOD	8315A	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MSD	P266014M261439	MSD	3546	1625C	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MSD	P266014M320337A	MSD	3550B	8015M	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MSD	P266014M321303A	MSD	3550B	8015B	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MS	P266014R240443A	MS	METHOD	8315A	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MS	P266014R261422	MS	3546	1625C	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MS	P266014R270949B	MS	METHOD	9012B	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MS	P266014R320247A	MS	3550B	8015M	IV
21-Apr-2011	SL-119-SA8N-SS-0.0-0.5MS	P266014R321133A	MS	3550B	8015B	IV
21-Apr-2011	DUP06-SA8N-QC-042111	6266020	FD	3050B	6010B	IV
21-Apr-2011	DUP06-SA8N-QC-042111	6266020	FD	3050B	6020	IV

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Apr-2011	DUP06-SA8N-QC-042111	6266020	FD	3060A	7199	IV
21-Apr-2011	DUP06-SA8N-QC-042111	6266020	FD	3550B	8082	IV
21-Apr-2011	DUP06-SA8N-QC-042111	6266020	FD	3550B	8270C	IV
21-Apr-2011	DUP06-SA8N-QC-042111	6266020	FD	3550B	8270C SIM	IV
21-Apr-2011	DUP06-SA8N-QC-042111	6266020	FD	METHOD	300.0	IV
21-Apr-2011	DUP06-SA8N-QC-042111	6266020	FD	METHOD	314.0	IV
21-Apr-2011	DUP06-SA8N-QC-042111	6266020	FD	METHOD	7471A	IV
21-Apr-2011	SL-117-SA8N-SS-0.0-0.5	6266012	N	3050B	6010B	IV
21-Apr-2011	SL-117-SA8N-SS-0.0-0.5	6266012	N	3050B	6020	IV
21-Apr-2011	SL-117-SA8N-SS-0.0-0.5	6266012	N	3060A	7199	IV
21-Apr-2011	SL-117-SA8N-SS-0.0-0.5	6266012	N	3546	1625C	IV
21-Apr-2011	SL-117-SA8N-SS-0.0-0.5	6266012	N	3550B	8015B	IV
21-Apr-2011	SL-117-SA8N-SS-0.0-0.5	6266012	N	3550B	8015M	IV
21-Apr-2011	SL-117-SA8N-SS-0.0-0.5	6266012	N	3550B	8082	IV
21-Apr-2011	SL-117-SA8N-SS-0.0-0.5	6266012	N	3550B	8270C	IV
21-Apr-2011	SL-117-SA8N-SS-0.0-0.5	6266012	N	3550B	8270C SIM	IV
21-Apr-2011	SL-117-SA8N-SS-0.0-0.5	6266012	N	8330	8330A	IV
21-Apr-2011	SL-117-SA8N-SS-0.0-0.5	6266012	N	METHOD	300.0	IV
21-Apr-2011	SL-117-SA8N-SS-0.0-0.5	6266012	N	METHOD	314.0	IV
21-Apr-2011	SL-117-SA8N-SS-0.0-0.5	6266012	N	METHOD	7471A	IV
21-Apr-2011	SL-117-SA8N-SS-0.0-0.5	6266012	N	METHOD	8015B	IV
21-Apr-2011	SL-117-SA8N-SS-0.0-0.5	6266012	N	METHOD	8015M	IV
21-Apr-2011	SL-117-SA8N-SS-0.0-0.5	6266012	N	METHOD	8315A	IV
21-Apr-2011	SL-117-SA8N-SS-0.0-0.5	6266012	N	METHOD	9012B	IV
21-Apr-2011	SL-126-SA8N-SS-0.0-0.5	6266019	N	3050B	6010B	IV
21-Apr-2011	SL-126-SA8N-SS-0.0-0.5	6266019	N	3050B	6020	IV

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Apr-2011	SL-126-SA8N-SS-0.0-0.5	6266019	N	3060A	7199	IV
21-Apr-2011	SL-126-SA8N-SS-0.0-0.5	6266019	N	3546	1625C	IV
21-Apr-2011	SL-126-SA8N-SS-0.0-0.5	6266019	N	3550B	8015B	IV
21-Apr-2011	SL-126-SA8N-SS-0.0-0.5	6266019	N	3550B	8015M	IV
21-Apr-2011	SL-126-SA8N-SS-0.0-0.5	6266019	N	3550B	8082	IV
21-Apr-2011	SL-126-SA8N-SS-0.0-0.5	6266019	N	3550B	8270C	IV
21-Apr-2011	SL-126-SA8N-SS-0.0-0.5	6266019	N	3550B	8270C SIM	IV
21-Apr-2011	SL-126-SA8N-SS-0.0-0.5	6266019	N	8330	8330A	IV
21-Apr-2011	SL-126-SA8N-SS-0.0-0.5	6266019	N	METHOD	300.0	IV
21-Apr-2011	SL-126-SA8N-SS-0.0-0.5	6266019	N	METHOD	314.0	IV
21-Apr-2011	SL-126-SA8N-SS-0.0-0.5	6266019	N	METHOD	7471A	IV
21-Apr-2011	SL-126-SA8N-SS-0.0-0.5	6266019	N	METHOD	8015B	IV
21-Apr-2011	SL-126-SA8N-SS-0.0-0.5	6266019	N	METHOD	8015M	IV
21-Apr-2011	SL-126-SA8N-SS-0.0-0.5	6266019	N	METHOD	8315A	IV
21-Apr-2011	SL-126-SA8N-SS-0.0-0.5	6266019	N	METHOD	9012B	IV
21-Apr-2011	SL-118-SA8N-SS-0.0-0.5	6266013	N	3050B	6010B	IV
21-Apr-2011	SL-118-SA8N-SS-0.0-0.5	6266013	N	3050B	6020	IV
21-Apr-2011	SL-118-SA8N-SS-0.0-0.5	6266013	N	3060A	7199	IV
21-Apr-2011	SL-118-SA8N-SS-0.0-0.5	6266013	N	3546	1625C	IV
21-Apr-2011	SL-118-SA8N-SS-0.0-0.5	6266013	N	3550B	8015B	IV
21-Apr-2011	SL-118-SA8N-SS-0.0-0.5	6266013	N	3550B	8015M	IV
21-Apr-2011	SL-118-SA8N-SS-0.0-0.5	6266013	N	3550B	8082	IV
21-Apr-2011	SL-118-SA8N-SS-0.0-0.5	6266013	N	3550B	8270C	IV
21-Apr-2011	SL-118-SA8N-SS-0.0-0.5	6266013	N	3550B	8270C SIM	IV
21-Apr-2011	SL-118-SA8N-SS-0.0-0.5	6266013	N	8330	8330A	IV
21-Apr-2011	SL-118-SA8N-SS-0.0-0.5	6266013	N	METHOD	300.0	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Apr-2011	SL-118-SA8N-SS-0.0-0.5	6266013	N	METHOD	314.0	IV
21-Apr-2011	SL-118-SA8N-SS-0.0-0.5	6266013	N	METHOD	6850	IV
21-Apr-2011	SL-118-SA8N-SS-0.0-0.5	6266013	N	METHOD	7471A	IV
21-Apr-2011	SL-118-SA8N-SS-0.0-0.5	6266013	N	METHOD	8015B	IV
21-Apr-2011	SL-118-SA8N-SS-0.0-0.5	6266013	N	METHOD	8015M	IV
21-Apr-2011	SL-118-SA8N-SS-0.0-0.5	6266013	N	METHOD	8315A	IV
21-Apr-2011	SL-118-SA8N-SS-0.0-0.5	6266013	N	METHOD	9012B	IV
21-Apr-2011	SL-116-SA8N-SS-0.0-0.5	6266011	N	3050B	6010B	IV
21-Apr-2011	SL-116-SA8N-SS-0.0-0.5	6266011	N	3050B	6020	IV
21-Apr-2011	SL-116-SA8N-SS-0.0-0.5	6266011	N	3060A	7199	IV
21-Apr-2011	SL-116-SA8N-SS-0.0-0.5	6266011	N	3546	1625C	IV
21-Apr-2011	SL-116-SA8N-SS-0.0-0.5	6266011	N	3550B	8015B	IV
21-Apr-2011	SL-116-SA8N-SS-0.0-0.5	6266011	N	3550B	8015M	IV
21-Apr-2011	SL-116-SA8N-SS-0.0-0.5	6266011	N	3550B	8082	IV
21-Apr-2011	SL-116-SA8N-SS-0.0-0.5	6266011	N	3550B	8270C	IV
21-Apr-2011	SL-116-SA8N-SS-0.0-0.5	6266011	N	3550B	8270C SIM	IV
21-Apr-2011	SL-116-SA8N-SS-0.0-0.5	6266011	N	8330	8330A	IV
21-Apr-2011	SL-116-SA8N-SS-0.0-0.5	6266011	N	METHOD	300.0	IV
21-Apr-2011	SL-116-SA8N-SS-0.0-0.5	6266011	N	METHOD	314.0	IV
21-Apr-2011	SL-116-SA8N-SS-0.0-0.5	6266011	N	METHOD	6850	IV
21-Apr-2011	SL-116-SA8N-SS-0.0-0.5	6266011	N	METHOD	7471A	IV
21-Apr-2011	SL-116-SA8N-SS-0.0-0.5	6266011	N	METHOD	8015B	IV
21-Apr-2011	SL-116-SA8N-SS-0.0-0.5	6266011	N	METHOD	8015M	IV
21-Apr-2011	SL-116-SA8N-SS-0.0-0.5	6266011	N	METHOD	8315A	IV
21-Apr-2011	SL-116-SA8N-SS-0.0-0.5	6266011	N	METHOD	9012B	IV
21-Apr-2011	SL-004-SA8N-SB-4.0-5.0	6266021	N	3050B	6010B	IV

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Apr-2011	SL-004-SA8N-SB-4.0-5.0	6266021	N	3050B	6020	IV
21-Apr-2011	SL-004-SA8N-SB-4.0-5.0	6266021	N	3060A	7199	IV
21-Apr-2011	SL-004-SA8N-SB-4.0-5.0	6266021	N	3550B	8082	IV
21-Apr-2011	SL-004-SA8N-SB-4.0-5.0	6266021	N	3550B	8270C	IV
21-Apr-2011	SL-004-SA8N-SB-4.0-5.0	6266021	N	3550B	8270C SIM	IV
21-Apr-2011	SL-004-SA8N-SB-4.0-5.0	6266021	N	5035	8260B	IV
21-Apr-2011	SL-004-SA8N-SB-4.0-5.0	6266021	N	5035	8260B SIM	IV
21-Apr-2011	SL-004-SA8N-SB-4.0-5.0	6266021	N	8330	8330A	IV
21-Apr-2011	SL-004-SA8N-SB-4.0-5.0	6266021	N	METHOD	300.0	IV
21-Apr-2011	SL-004-SA8N-SB-4.0-5.0	6266021	N	METHOD	314.0	IV
21-Apr-2011	SL-004-SA8N-SB-4.0-5.0	6266021	N	METHOD	7471A	IV
21-Apr-2011	SL-004-SA8N-SB-4.0-5.0	6266021	N	METHOD	8015M	IV
21-Apr-2011	SL-004-SA8N-SB-4.0-5.0DUP	P266021D271623B	DUP	METHOD	314.0	IV
21-Apr-2011	SL-004-SA8N-SB-4.0-5.0DUP	P266021D272207B	DUP	METHOD	300.0	IV
21-Apr-2011	SL-004-SA8N-SB-4.0-5.0MS	P266021R271645B	MS	METHOD	314.0	IV
21-Apr-2011	SL-004-SA8N-SB-4.0-5.0MS	P266021R272221B	MS	METHOD	300.0	IV
21-Apr-2011	SL-004-SA8N-SB-9.0-10.0	6266022	N	3050B	6010B	IV
21-Apr-2011	SL-004-SA8N-SB-9.0-10.0	6266022	N	3050B	6020	IV
21-Apr-2011	SL-004-SA8N-SB-9.0-10.0	6266022	N	3060A	7199	IV
21-Apr-2011	SL-004-SA8N-SB-9.0-10.0	6266022	N	3550B	8082	IV
21-Apr-2011	SL-004-SA8N-SB-9.0-10.0	6266022	N	3550B	8270C	IV
21-Apr-2011	SL-004-SA8N-SB-9.0-10.0	6266022	N	3550B	8270C SIM	IV
21-Apr-2011	SL-004-SA8N-SB-9.0-10.0	6266022	N	8330	8330A	IV
21-Apr-2011	SL-004-SA8N-SB-9.0-10.0	6266022	N	METHOD	300.0	IV
21-Apr-2011	SL-004-SA8N-SB-9.0-10.0	6266022	N	METHOD	314.0	IV
21-Apr-2011	SL-004-SA8N-SB-9.0-10.0	6266022	N	METHOD	7471A	IV

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Apr-2011	SL-004-SA8N-SB-9.0-10.0	6266022	N	METHOD	8015M	IV
21-Apr-2011	SL-005-SA8N-SB-4.0-5.0	6266023	N	3050B	6010B	IV
21-Apr-2011	SL-005-SA8N-SB-4.0-5.0	6266023	N	3050B	6020	IV
21-Apr-2011	SL-005-SA8N-SB-4.0-5.0	6266023	N	3060A	7199	IV
21-Apr-2011	SL-005-SA8N-SB-4.0-5.0	6266023	N	3550B	8082	IV
21-Apr-2011	SL-005-SA8N-SB-4.0-5.0	6266023	N	3550B	8270C	IV
21-Apr-2011	SL-005-SA8N-SB-4.0-5.0	6266023	N	3550B	8270C SIM	IV
21-Apr-2011	SL-005-SA8N-SB-4.0-5.0	6266023	N	5035	8260B	IV
21-Apr-2011	SL-005-SA8N-SB-4.0-5.0	6266023	N	5035	8260B SIM	IV
21-Apr-2011	SL-005-SA8N-SB-4.0-5.0	6266023	N	8330	8330A	IV
21-Apr-2011	SL-005-SA8N-SB-4.0-5.0	6266023	N	METHOD	300.0	IV
21-Apr-2011	SL-005-SA8N-SB-4.0-5.0	6266023	N	METHOD	314.0	IV
21-Apr-2011	SL-005-SA8N-SB-4.0-5.0	6266023	N	METHOD	7471A	IV
21-Apr-2011	SL-005-SA8N-SB-4.0-5.0	6266023	N	METHOD	8015M	IV
21-Apr-2011	SL-005-SA8N-SB-8.0-9.0	6266024	N	3050B	6010B	IV
21-Apr-2011	SL-005-SA8N-SB-8.0-9.0	6266024	N	3050B	6020	IV
21-Apr-2011	SL-005-SA8N-SB-8.0-9.0	6266024	N	3060A	7199	IV
21-Apr-2011	SL-005-SA8N-SB-8.0-9.0	6266024	N	3550B	8082	IV
21-Apr-2011	SL-005-SA8N-SB-8.0-9.0	6266024	N	3550B	8270C	IV
21-Apr-2011	SL-005-SA8N-SB-8.0-9.0	6266024	N	3550B	8270C SIM	IV
21-Apr-2011	SL-005-SA8N-SB-8.0-9.0	6266024	N	8330	8330A	IV
21-Apr-2011	SL-005-SA8N-SB-8.0-9.0	6266024	N	METHOD	300.0	IV
21-Apr-2011	SL-005-SA8N-SB-8.0-9.0	6266024	N	METHOD	314.0	IV
21-Apr-2011	SL-005-SA8N-SB-8.0-9.0	6266024	N	METHOD	7471A	IV
21-Apr-2011	SL-005-SA8N-SB-8.0-9.0	6266024	N	METHOD	8015M	IV
21-Apr-2011	SL-115-SA8N-SS-0.0-0.5	6266010	N	3050B	6010B	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Apr-2011	SL-115-SA8N-SS-0.0-0.5	6266010	N	3050B	6020	IV
21-Apr-2011	SL-115-SA8N-SS-0.0-0.5	6266010	N	3060A	7199	IV
21-Apr-2011	SL-115-SA8N-SS-0.0-0.5	6266010	N	3546	1625C	IV
21-Apr-2011	SL-115-SA8N-SS-0.0-0.5	6266010	N	3550B	8015B	IV
21-Apr-2011	SL-115-SA8N-SS-0.0-0.5	6266010	N	3550B	8015M	IV
21-Apr-2011	SL-115-SA8N-SS-0.0-0.5	6266010	N	3550B	8082	IV
21-Apr-2011	SL-115-SA8N-SS-0.0-0.5	6266010	N	3550B	8270C	IV
21-Apr-2011	SL-115-SA8N-SS-0.0-0.5	6266010	N	3550B	8270C SIM	IV
21-Apr-2011	SL-115-SA8N-SS-0.0-0.5	6266010	N	8330	8330A	IV
21-Apr-2011	SL-115-SA8N-SS-0.0-0.5	6266010	N	METHOD	300.0	IV
21-Apr-2011	SL-115-SA8N-SS-0.0-0.5	6266010	N	METHOD	314.0	IV
21-Apr-2011	SL-115-SA8N-SS-0.0-0.5	6266010	N	METHOD	6850	IV
21-Apr-2011	SL-115-SA8N-SS-0.0-0.5	6266010	N	METHOD	7471A	IV
21-Apr-2011	SL-115-SA8N-SS-0.0-0.5	6266010	N	METHOD	8015B	IV
21-Apr-2011	SL-115-SA8N-SS-0.0-0.5	6266010	N	METHOD	8015M	IV
21-Apr-2011	SL-115-SA8N-SS-0.0-0.5	6266010	N	METHOD	8315A	IV
21-Apr-2011	SL-115-SA8N-SS-0.0-0.5	6266010	N	METHOD	9012B	IV
21-Apr-2011	SL-112-SA8N-SS-0.0-0.5	6266009	N	3050B	6010B	IV
21-Apr-2011	SL-112-SA8N-SS-0.0-0.5	6266009	N	3050B	6020	IV
21-Apr-2011	SL-112-SA8N-SS-0.0-0.5	6266009	N	3060A	7199	IV
21-Apr-2011	SL-112-SA8N-SS-0.0-0.5	6266009	N	3546	1625C	IV
21-Apr-2011	SL-112-SA8N-SS-0.0-0.5	6266009	N	3550B	8015B	IV
21-Apr-2011	SL-112-SA8N-SS-0.0-0.5	6266009	N	3550B	8015M	IV
21-Apr-2011	SL-112-SA8N-SS-0.0-0.5	6266009	N	3550B	8082	IV
21-Apr-2011	SL-112-SA8N-SS-0.0-0.5	6266009	N	3550B	8270C	IV
21-Apr-2011	SL-112-SA8N-SS-0.0-0.5	6266009	N	3550B	8270C SIM	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Apr-2011	SL-112-SA8N-SS-0.0-0.5	6266009	N	8330	8330A	IV
21-Apr-2011	SL-112-SA8N-SS-0.0-0.5	6266009	N	METHOD	300.0	IV
21-Apr-2011	SL-112-SA8N-SS-0.0-0.5	6266009	N	METHOD	314.0	IV
21-Apr-2011	SL-112-SA8N-SS-0.0-0.5	6266009	N	METHOD	7471A	IV
21-Apr-2011	SL-112-SA8N-SS-0.0-0.5	6266009	N	METHOD	8015B	IV
21-Apr-2011	SL-112-SA8N-SS-0.0-0.5	6266009	N	METHOD	8015M	IV
21-Apr-2011	SL-112-SA8N-SS-0.0-0.5	6266009	N	METHOD	8315A	IV
21-Apr-2011	SL-112-SA8N-SS-0.0-0.5	6266009	N	METHOD	9012B	IV
21-Apr-2011	SL-111-SA8N-SS-0.0-0.5	6266008	N	3050B	6010B	IV
21-Apr-2011	SL-111-SA8N-SS-0.0-0.5	6266008	N	3050B	6020	IV
21-Apr-2011	SL-111-SA8N-SS-0.0-0.5	6266008	N	3060A	7199	IV
21-Apr-2011	SL-111-SA8N-SS-0.0-0.5	6266008	N	3546	1625C	IV
21-Apr-2011	SL-111-SA8N-SS-0.0-0.5	6266008	N	3550B	8015B	IV
21-Apr-2011	SL-111-SA8N-SS-0.0-0.5	6266008	N	3550B	8015M	IV
21-Apr-2011	SL-111-SA8N-SS-0.0-0.5	6266008	N	3550B	8082	IV
21-Apr-2011	SL-111-SA8N-SS-0.0-0.5	6266008	N	3550B	8270C	IV
21-Apr-2011	SL-111-SA8N-SS-0.0-0.5	6266008	N	3550B	8270C SIM	IV
21-Apr-2011	SL-111-SA8N-SS-0.0-0.5	6266008	N	8330	8330A	IV
21-Apr-2011	SL-111-SA8N-SS-0.0-0.5	6266008	N	METHOD	300.0	IV
21-Apr-2011	SL-111-SA8N-SS-0.0-0.5	6266008	N	METHOD	314.0	IV
21-Apr-2011	SL-111-SA8N-SS-0.0-0.5	6266008	N	METHOD	6850	IV
21-Apr-2011	SL-111-SA8N-SS-0.0-0.5	6266008	N	METHOD	7471A	IV
21-Apr-2011	SL-111-SA8N-SS-0.0-0.5	6266008	N	METHOD	8015B	IV
21-Apr-2011	SL-111-SA8N-SS-0.0-0.5	6266008	N	METHOD	8015M	IV
21-Apr-2011	SL-111-SA8N-SS-0.0-0.5	6266008	N	METHOD	8315A	IV
21-Apr-2011	SL-111-SA8N-SS-0.0-0.5	6266008	N	METHOD	9012B	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Apr-2011	SL-111-SA8N-SS-0.0-0.5MSD	P266008M241044A	MSD	METHOD	6850	IV
21-Apr-2011	SL-111-SA8N-SS-0.0-0.5MS	P266008R241037A	MS	METHOD	6850	IV
21-Apr-2011	SL-125-SA8N-SS-0.0-0.5	6266018	N	3050B	6010B	IV
21-Apr-2011	SL-125-SA8N-SS-0.0-0.5	6266018	N	3050B	6020	IV
21-Apr-2011	SL-125-SA8N-SS-0.0-0.5	6266018	N	3060A	7199	IV
21-Apr-2011	SL-125-SA8N-SS-0.0-0.5	6266018	N	3546	1625C	IV
21-Apr-2011	SL-125-SA8N-SS-0.0-0.5	6266018	N	3550B	8015B	IV
21-Apr-2011	SL-125-SA8N-SS-0.0-0.5	6266018	N	3550B	8015M	IV
21-Apr-2011	SL-125-SA8N-SS-0.0-0.5	6266018	N	3550B	8082	IV
21-Apr-2011	SL-125-SA8N-SS-0.0-0.5	6266018	N	3550B	8270C	IV
21-Apr-2011	SL-125-SA8N-SS-0.0-0.5	6266018	N	3550B	8270C SIM	IV
21-Apr-2011	SL-125-SA8N-SS-0.0-0.5	6266018	N	8330	8330A	IV
21-Apr-2011	SL-125-SA8N-SS-0.0-0.5	6266018	N	METHOD	300.0	IV
21-Apr-2011	SL-125-SA8N-SS-0.0-0.5	6266018	N	METHOD	314.0	IV
21-Apr-2011	SL-125-SA8N-SS-0.0-0.5	6266018	N	METHOD	6850	IV
21-Apr-2011	SL-125-SA8N-SS-0.0-0.5	6266018	N	METHOD	7471A	IV
21-Apr-2011	SL-125-SA8N-SS-0.0-0.5	6266018	N	METHOD	8015B	IV
21-Apr-2011	SL-125-SA8N-SS-0.0-0.5	6266018	N	METHOD	8015M	IV
21-Apr-2011	SL-125-SA8N-SS-0.0-0.5	6266018	N	METHOD	8315A	IV
21-Apr-2011	SL-125-SA8N-SS-0.0-0.5	6266018	N	METHOD	9012B	IV
21-Apr-2011	SL-006-SA8N-SB-4.0-5.0	6266025	N	3050B	6010B	IV
21-Apr-2011	SL-006-SA8N-SB-4.0-5.0	6266025	N	3050B	6020	IV
21-Apr-2011	SL-006-SA8N-SB-4.0-5.0	6266025	N	3060A	7199	IV
21-Apr-2011	SL-006-SA8N-SB-4.0-5.0	6266025	N	3550B	8082	IV
21-Apr-2011	SL-006-SA8N-SB-4.0-5.0	6266025	N	3550B	8270C	IV
21-Apr-2011	SL-006-SA8N-SB-4.0-5.0	6266025	N	3550B	8270C SIM	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Apr-2011	SL-006-SA8N-SB-4.0-5.0	6266025	N	5035	8260B	IV
21-Apr-2011	SL-006-SA8N-SB-4.0-5.0	6266025	N	5035	8260B SIM	IV
21-Apr-2011	SL-006-SA8N-SB-4.0-5.0	6266025	N	8330	8330A	IV
21-Apr-2011	SL-006-SA8N-SB-4.0-5.0	6266025	N	METHOD	300.0	IV
21-Apr-2011	SL-006-SA8N-SB-4.0-5.0	6266025	N	METHOD	314.0	IV
21-Apr-2011	SL-006-SA8N-SB-4.0-5.0	6266025	N	METHOD	7471A	IV
21-Apr-2011	SL-006-SA8N-SB-4.0-5.0	6266025	N	METHOD	8015M	IV
21-Apr-2011	SL-006-SA8N-SB-8.0-9.0	6266026	N	3050B	6010B	IV
21-Apr-2011	SL-006-SA8N-SB-8.0-9.0	6266026	N	3050B	6020	IV
21-Apr-2011	SL-006-SA8N-SB-8.0-9.0	6266026	N	3060A	7199	IV
21-Apr-2011	SL-006-SA8N-SB-8.0-9.0	6266026	N	3550B	8082	IV
21-Apr-2011	SL-006-SA8N-SB-8.0-9.0	6266026	N	3550B	8270C	IV
21-Apr-2011	SL-006-SA8N-SB-8.0-9.0	6266026	N	3550B	8270C SIM	IV
21-Apr-2011	SL-006-SA8N-SB-8.0-9.0	6266026	N	8330	8330A	IV
21-Apr-2011	SL-006-SA8N-SB-8.0-9.0	6266026	N	METHOD	300.0	IV
21-Apr-2011	SL-006-SA8N-SB-8.0-9.0	6266026	N	METHOD	314.0	IV
21-Apr-2011	SL-006-SA8N-SB-8.0-9.0	6266026	N	METHOD	7471A	IV
21-Apr-2011	SL-006-SA8N-SB-8.0-9.0	6266026	N	METHOD	8015M	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE134 Laboratory: LL

EDD Filename: PrepDE134_v1 eQAPP Name: CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: DUP06-SA8N-QC-042111 *Collected:* 4/21/2011 9:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.9		0.86	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-004-SA8N-SB-4.0-5.0 *Collected:* 4/21/2011 10:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	8.6		0.95	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-004-SA8N-SB-9.0-10.0 *Collected:* 4/21/2011 10:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.5		0.90	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-005-SA8N-SB-4.0-5.0 *Collected:* 4/21/2011 11:57:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	5.1		0.93	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-005-SA8N-SB-8.0-9.0 *Collected:* 4/21/2011 12:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	5.0		0.89	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-006-SA8N-SB-4.0-5.0 *Collected:* 4/21/2011 3:03:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	6.7		0.97	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-006-SA8N-SB-8.0-9.0 *Collected:* 4/21/2011 3:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	9.1		0.94	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-111-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 1:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.5		0.90	MDL	1.1	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: PrepDE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: GENCHEM

Method: 300.0 **Matrix: SO**

Sample ID: SL-112-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 1:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.1		0.91	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-115-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 12:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.90	U	0.90	MDL	1.1	PQL	mg/Kg	UJ	Q

Sample ID: SL-116-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 10:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.8		0.96	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-117-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.4		0.84	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-118-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.3		0.94	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-119-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.4		0.85	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.5	J	0.85	MDL	1.6	PQL	mg/Kg	J	Z

Sample ID: SL-125-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 2:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.0		0.98	MDL	1.2	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: PrepDE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: GENCHEM

Method: 300.0 **Matrix: SO**

Sample ID: SL-126-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.9		0.89	MDL	1.1	PQL	mg/Kg	J	Q

Method Category: GENCHEM

Method: 9012B **Matrix: SO**

Sample ID: SL-115-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 12:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CYANIDE	0.21	J	0.20	MDL	0.55	PQL	mg/Kg	J	Z

Sample ID: SL-116-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 10:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CYANIDE	0.40	J	0.22	MDL	0.60	PQL	mg/Kg	J	Z

Sample ID: SL-125-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 2:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CYANIDE	0.24	J	0.22	MDL	0.60	PQL	mg/Kg	J	Z

Sample ID: SL-126-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CYANIDE	0.21	J	0.20	MDL	0.55	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: DUP06-SA8N-QC-042111 *Collected:* 4/21/2011 9:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.04	J	0.945	MDL	5.31	PQL	mg/Kg	J	Z
POTASSIUM	3680		19.1	MDL	53.1	PQL	mg/Kg	J	Q
SODIUM	82.1	J	39.6	MDL	106	PQL	mg/Kg	J	Z
TIN	2.53	J	1.06	MDL	10.6	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory:** LL

EDD Filename: PrepDE134_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-004-SA8N-SB-4.0-5.0 ***Collected:*** 4/21/2011 10:25:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3930		21.1	MDL	58.7	PQL	mg/Kg	J	Q
TIN	2.88	J	1.17	MDL	11.7	PQL	mg/Kg	U	B
Zirconium	2.97	J	0.985	MDL	5.87	PQL	mg/Kg	J	Z

Sample ID: SL-004-SA8N-SB-9.0-10.0 ***Collected:*** 4/21/2011 10:35:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.68	J	0.985	MDL	5.53	PQL	mg/Kg	J	Z
POTASSIUM	1630		19.9	MDL	55.3	PQL	mg/Kg	J	Q
SODIUM	106	J	41.3	MDL	111	PQL	mg/Kg	J	Z
TIN	2.42	J	1.11	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	1.87	J	0.929	MDL	5.53	PQL	mg/Kg	J	Z

Sample ID: SL-005-SA8N-SB-4.0-5.0 ***Collected:*** 4/21/2011 11:57:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	2720		20.6	MDL	57.3	PQL	mg/Kg	J	Q
TIN	2.64	J	1.15	MDL	11.5	PQL	mg/Kg	U	B
Zirconium	2.60	J	0.963	MDL	5.73	PQL	mg/Kg	J	Z

Sample ID: SL-005-SA8N-SB-8.0-9.0 ***Collected:*** 4/21/2011 12:30:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	2.35	J	0.976	MDL	5.48	PQL	mg/Kg	J	Z
POTASSIUM	1320		19.7	MDL	54.8	PQL	mg/Kg	J	Q
TIN	2.24	J	1.10	MDL	11.0	PQL	mg/Kg	U	B
Zirconium	1.25	J	0.921	MDL	5.48	PQL	mg/Kg	J	Z

Sample ID: SL-006-SA8N-SB-4.0-5.0 ***Collected:*** 4/21/2011 3:03:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.77	J	1.06	MDL	5.97	PQL	mg/Kg	J	Z
POTASSIUM	1920		21.5	MDL	59.7	PQL	mg/Kg	J	Q
TIN	2.20	J	1.19	MDL	11.9	PQL	mg/Kg	U	B
Zirconium	2.47	J	1.00	MDL	5.97	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory:** LL

EDD Filename: PrepDE134_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-006-SA8N-SB-8.0-9.0 ***Collected:*** 4/21/2011 3:10:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.57	J	1.05	MDL	5.89	PQL	mg/Kg	J	Z
POTASSIUM	2470		21.2	MDL	58.9	PQL	mg/Kg	J	Q
TIN	2.78	J	1.18	MDL	11.8	PQL	mg/Kg	U	B
Zirconium	1.88	J	0.989	MDL	5.89	PQL	mg/Kg	J	Z

Sample ID: SL-111-SA8N-SS-0.0-0.5 ***Collected:*** 4/21/2011 1:40:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	4990		19.9	MDL	55.3	PQL	mg/Kg	J	Q
SODIUM	80.4	J	41.2	MDL	111	PQL	mg/Kg	J	Z
TIN	3.00	J	1.11	MDL	11.1	PQL	mg/Kg	U	B

Sample ID: SL-112-SA8N-SS-0.0-0.5 ***Collected:*** 4/21/2011 1:15:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.43	J	0.985	MDL	5.54	PQL	mg/Kg	J	Z
POTASSIUM	4220		19.9	MDL	55.4	PQL	mg/Kg	J	Q
SODIUM	73.1	J	41.3	MDL	111	PQL	mg/Kg	J	Z
TIN	2.67	J	1.11	MDL	11.1	PQL	mg/Kg	U	B

Sample ID: SL-115-SA8N-SS-0.0-0.5 ***Collected:*** 4/21/2011 12:40:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.06	J	0.971	MDL	5.45	PQL	mg/Kg	J	Z
POTASSIUM	3710		19.6	MDL	54.5	PQL	mg/Kg	J	Q
SODIUM	80.0	J	40.7	MDL	109	PQL	mg/Kg	J	Z
TIN	2.68	J	1.09	MDL	10.9	PQL	mg/Kg	U	B

Sample ID: SL-116-SA8N-SS-0.0-0.5 ***Collected:*** 4/21/2011 10:20:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.32	J	1.07	MDL	6.02	PQL	mg/Kg	J	Z
POTASSIUM	2690		21.7	MDL	60.2	PQL	mg/Kg	J	Q
SODIUM	104	J	44.9	MDL	120	PQL	mg/Kg	J	Z
TIN	2.40	J	1.20	MDL	12.0	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory:** LL

EDD Filename: PrepDE134_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-117-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.32	J	0.937	MDL	5.26	PQL	mg/Kg	J	Z
POTASSIUM	4030		18.9	MDL	52.6	PQL	mg/Kg	J	Q
SODIUM	85.3	J	39.3	MDL	105	PQL	mg/Kg	J	Z
TIN	2.64	J	1.05	MDL	10.5	PQL	mg/Kg	U	B

Sample ID: SL-118-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3630		20.9	MDL	58.2	PQL	mg/Kg	J	Q
TIN	2.94	J	1.16	MDL	11.6	PQL	mg/Kg	U	B

Sample ID: SL-119-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.66	J	0.932	MDL	5.24	PQL	mg/Kg	J	Z
POTASSIUM	3760		18.9	MDL	52.4	PQL	mg/Kg	J	Q
SODIUM	89.8	J	39.1	MDL	105	PQL	mg/Kg	J	Z
TIN	2.63	J	1.05	MDL	10.5	PQL	mg/Kg	U	B

Sample ID: SL-125-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 2:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.34	J	1.06	MDL	5.95	PQL	mg/Kg	J	Z
POTASSIUM	3640		21.4	MDL	59.5	PQL	mg/Kg	J	Q
SODIUM	88.0	J	44.4	MDL	119	PQL	mg/Kg	J	Z
TIN	2.53	J	1.19	MDL	11.9	PQL	mg/Kg	U	B

Sample ID: SL-126-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.02	J	0.988	MDL	5.55	PQL	mg/Kg	J	Z
POTASSIUM	3850		20.0	MDL	55.5	PQL	mg/Kg	J	Q
SODIUM	74.1	J	41.4	MDL	111	PQL	mg/Kg	J	Z
TIN	2.32	J	1.11	MDL	11.1	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory:** LL

EDD Filename: PrepDE134_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: DUP06-SA8N-QC-042111 *Collected:* 4/21/2011 9:05:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.166	J	0.0421	MDL	0.421	PQL	mg/Kg	J	Z

Sample ID: DUP06-SA8N-QC-042111 *Collected:* 4/21/2011 9:05:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.110	J	0.0631	MDL	0.210	PQL	mg/Kg	UJ	Q, B
CHROMIUM	26.2		0.126	MDL	0.421	PQL	mg/Kg	J	Q, A
COPPER	11.9		0.0694	MDL	0.421	PQL	mg/Kg	J	A
LEAD	8.66		0.0109	MDL	0.210	PQL	mg/Kg	J	Q
SILVER	0.0469	J	0.0126	MDL	0.105	PQL	mg/Kg	J	Z
VANADIUM	43.7		0.0231	MDL	0.105	PQL	mg/Kg	J	A

Sample ID: SL-004-SA8N-SB-4.0-5.0 *Collected:* 4/21/2011 10:25:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0723	J	0.0460	MDL	0.460	PQL	mg/Kg	J	Z

Sample ID: SL-004-SA8N-SB-4.0-5.0 *Collected:* 4/21/2011 10:25:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.107	J	0.0690	MDL	0.230	PQL	mg/Kg	UJ	Q, B
CHROMIUM	49.0		0.138	MDL	0.460	PQL	mg/Kg	J	Q, A
COPPER	18.9		0.0759	MDL	0.460	PQL	mg/Kg	J	A
LEAD	9.80		0.0120	MDL	0.230	PQL	mg/Kg	J	Q
SILVER	0.0295	J	0.0138	MDL	0.115	PQL	mg/Kg	J	Z
VANADIUM	69.5		0.0253	MDL	0.115	PQL	mg/Kg	J	A

Sample ID: SL-004-SA8N-SB-9.0-10.0 *Collected:* 4/21/2011 10:35:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0645	U	0.0645	MDL	0.215	PQL	mg/Kg	UJ	Q
CHROMIUM	23.9		0.129	MDL	0.430	PQL	mg/Kg	J	Q, A
COPPER	7.95		0.0709	MDL	0.430	PQL	mg/Kg	J	A
LEAD	8.44		0.0112	MDL	0.215	PQL	mg/Kg	J	Q
SILVER	0.0221	J	0.0129	MDL	0.107	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory:** LL

EDD Filename: PrepDE134_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-004-SA8N-SB-9.0-10.0 ***Collected:*** 4/21/2011 10:35:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
VANADIUM	37.5		0.0236	MDL	0.107	PQL	mg/Kg	J	A

Sample ID: SL-005-SA8N-SB-4.0-5.0 ***Collected:*** 4/21/2011 11:57:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.582		0.0661	MDL	0.220	PQL	mg/Kg	J	Q

Sample ID: SL-005-SA8N-SB-4.0-5.0 ***Collected:*** 4/21/2011 11:57:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0886	J	0.0441	MDL	0.441	PQL	mg/Kg	J	Z

Sample ID: SL-005-SA8N-SB-4.0-5.0 ***Collected:*** 4/21/2011 11:57:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	36.4		0.132	MDL	0.441	PQL	mg/Kg	J	Q, A
COPPER	16.0		0.0728	MDL	0.441	PQL	mg/Kg	J	A
LEAD	54.0		0.0115	MDL	0.220	PQL	mg/Kg	J	Q
SILVER	0.0528	J	0.0132	MDL	0.110	PQL	mg/Kg	J	Z
VANADIUM	56.7		0.0243	MDL	0.110	PQL	mg/Kg	J	A

Sample ID: SL-005-SA8N-SB-8.0-9.0 ***Collected:*** 4/21/2011 12:30:00 ***Analysis Type:*** REA ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	115		0.0282	MDL	0.543	PQL	mg/Kg	J	Q

Sample ID: SL-005-SA8N-SB-8.0-9.0 ***Collected:*** 4/21/2011 12:30:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0844	J	0.0434	MDL	0.434	PQL	mg/Kg	J	Z

Sample ID: SL-005-SA8N-SB-8.0-9.0 ***Collected:*** 4/21/2011 12:30:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	1.90		0.0652	MDL	0.217	PQL	mg/Kg	J	Q
CHROMIUM	19.2		0.130	MDL	0.434	PQL	mg/Kg	J	Q, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: PrepDE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-005-SA8N-SB-8.0-9.0 *Collected:* 4/21/2011 12:30:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	7.79		0.0717	MDL	0.434	PQL	mg/Kg	J	A
SILVER	0.0420	J	0.0130	MDL	0.109	PQL	mg/Kg	J	Z
VANADIUM	36.9		0.0239	MDL	0.109	PQL	mg/Kg	J	A

Sample ID: SL-006-SA8N-SB-4.0-5.0 *Collected:* 4/21/2011 3:03:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0818	J	0.0473	MDL	0.473	PQL	mg/Kg	J	Z

Sample ID: SL-006-SA8N-SB-4.0-5.0 *Collected:* 4/21/2011 3:03:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.118	J	0.0710	MDL	0.237	PQL	mg/Kg	UJ	Q, B
CHROMIUM	30.8		0.142	MDL	0.473	PQL	mg/Kg	J	Q, A
COPPER	13.6		0.0781	MDL	0.473	PQL	mg/Kg	J	A
LEAD	9.99		0.0123	MDL	0.237	PQL	mg/Kg	J	Q
SILVER	0.0343	J	0.0142	MDL	0.118	PQL	mg/Kg	J	Z
VANADIUM	49.3		0.0260	MDL	0.118	PQL	mg/Kg	J	A

Sample ID: SL-006-SA8N-SB-8.0-9.0 *Collected:* 4/21/2011 3:10:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0801	J	0.0471	MDL	0.471	PQL	mg/Kg	J	Z

Sample ID: SL-006-SA8N-SB-8.0-9.0 *Collected:* 4/21/2011 3:10:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.129	J	0.0707	MDL	0.236	PQL	mg/Kg	UJ	Q, B
CHROMIUM	36.3		0.141	MDL	0.471	PQL	mg/Kg	J	Q, A
COPPER	13.7		0.0777	MDL	0.471	PQL	mg/Kg	J	A
LEAD	7.12		0.0122	MDL	0.236	PQL	mg/Kg	J	Q
SILVER	0.0438	J	0.0141	MDL	0.118	PQL	mg/Kg	J	Z
VANADIUM	49.2		0.0259	MDL	0.118	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: PrepDE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-111-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 1:40:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.144	J	0.0451	MDL	0.451	PQL	mg/Kg	J	Z

Sample ID: SL-111-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 1:40:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.116	J	0.0676	MDL	0.225	PQL	mg/Kg	UJ	Q, B
CHROMIUM	21.0		0.135	MDL	0.451	PQL	mg/Kg	J	Q, A
COPPER	12.2		0.0744	MDL	0.451	PQL	mg/Kg	J	A
LEAD	17.8		0.0117	MDL	0.225	PQL	mg/Kg	J	Q
SILVER	0.0394	J	0.0135	MDL	0.113	PQL	mg/Kg	J	Z
VANADIUM	33.8		0.0248	MDL	0.113	PQL	mg/Kg	J	A

Sample ID: SL-112-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 1:15:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.226	J	0.0443	MDL	0.443	PQL	mg/Kg	J	Z

Sample ID: SL-112-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 1:15:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.104	J	0.0664	MDL	0.221	PQL	mg/Kg	UJ	Q, B
CHROMIUM	23.9		0.133	MDL	0.443	PQL	mg/Kg	J	Q, A
COPPER	12.4		0.0731	MDL	0.443	PQL	mg/Kg	J	A
LEAD	8.26		0.0115	MDL	0.221	PQL	mg/Kg	J	Q
SILVER	0.0473	J	0.0133	MDL	0.111	PQL	mg/Kg	J	Z
VANADIUM	37.3		0.0244	MDL	0.111	PQL	mg/Kg	J	A

Sample ID: SL-115-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 12:40:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0910	J	0.0445	MDL	0.445	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory:** LL

EDD Filename: PrepDE134_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-115-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 12:40:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.129	J	0.0667	MDL	0.222	PQL	mg/Kg	UJ	Q, B
CHROMIUM	19.0		0.133	MDL	0.445	PQL	mg/Kg	J	Q, A
COPPER	10.1		0.0734	MDL	0.445	PQL	mg/Kg	J	A
LEAD	19.2		0.0116	MDL	0.222	PQL	mg/Kg	J	Q
VANADIUM	29.7		0.0245	MDL	0.111	PQL	mg/Kg	J	A

Sample ID: SL-116-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 10:20:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.150	J	0.0477	MDL	0.477	PQL	mg/Kg	J	Z

Sample ID: SL-116-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 10:20:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.165	J	0.0715	MDL	0.238	PQL	mg/Kg	UJ	Q, B
CHROMIUM	15.5		0.143	MDL	0.477	PQL	mg/Kg	J	Q, A
COPPER	10.6		0.0786	MDL	0.477	PQL	mg/Kg	J	A
LEAD	19.6		0.0124	MDL	0.238	PQL	mg/Kg	J	Q
SILVER	0.0525	J	0.0143	MDL	0.119	PQL	mg/Kg	J	Z
VANADIUM	29.5		0.0262	MDL	0.119	PQL	mg/Kg	J	A

Sample ID: SL-117-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:20:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.144	J	0.0401	MDL	0.401	PQL	mg/Kg	J	Z

Sample ID: SL-117-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:20:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0883	J	0.0602	MDL	0.201	PQL	mg/Kg	UJ	Q, B
CHROMIUM	25.8		0.120	MDL	0.401	PQL	mg/Kg	J	Q, A
COPPER	12.9		0.0662	MDL	0.401	PQL	mg/Kg	J	A
LEAD	11.5		0.0104	MDL	0.201	PQL	mg/Kg	J	Q
SILVER	0.0795	J	0.0120	MDL	0.100	PQL	mg/Kg	J	Z
VANADIUM	41.6		0.0221	MDL	0.100	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: PrepDE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-118-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:55:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.176	J	0.0465	MDL	0.465	PQL	mg/Kg	J	Z

Sample ID: SL-118-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:55:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.113	J	0.0698	MDL	0.233	PQL	mg/Kg	UJ	Q, B
CHROMIUM	21.0		0.140	MDL	0.465	PQL	mg/Kg	J	Q, A
COPPER	12.0		0.0768	MDL	0.465	PQL	mg/Kg	J	A
LEAD	12.9		0.0121	MDL	0.233	PQL	mg/Kg	J	Q
SILVER	0.0411	J	0.0140	MDL	0.116	PQL	mg/Kg	J	Z
VANADIUM	40.6		0.0256	MDL	0.116	PQL	mg/Kg	J	A

Sample ID: SL-119-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:00:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.171	J	0.0419	MDL	0.419	PQL	mg/Kg	J	Z

Sample ID: SL-119-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:00:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.143	J	0.0628	MDL	0.209	PQL	mg/Kg	UJ	Q, B
CHROMIUM	23.5		0.126	MDL	0.419	PQL	mg/Kg	J	Q, A
COPPER	10.1		0.0691	MDL	0.419	PQL	mg/Kg	J	A
LEAD	7.08		0.0109	MDL	0.209	PQL	mg/Kg	J	Q
SILVER	0.0481	J	0.0126	MDL	0.105	PQL	mg/Kg	J	Z
VANADIUM	39.4		0.0230	MDL	0.105	PQL	mg/Kg	J	A

Sample ID: SL-125-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 2:00:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.226	J	0.0476	MDL	0.476	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: PrepDE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-125-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 2:00:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.152	J	0.0714	MDL	0.238	PQL	mg/Kg	UJ	Q, B
CHROMIUM	19.0		0.143	MDL	0.476	PQL	mg/Kg	J	Q, A
COPPER	11.5		0.0785	MDL	0.476	PQL	mg/Kg	J	A
LEAD	17.0		0.0124	MDL	0.238	PQL	mg/Kg	J	Q
SILVER	0.0510	J	0.0143	MDL	0.119	PQL	mg/Kg	J	Z
VANADIUM	32.1		0.0262	MDL	0.119	PQL	mg/Kg	J	A

Sample ID: SL-126-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:40:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.244	J	0.0431	MDL	0.431	PQL	mg/Kg	J	Z

Sample ID: SL-126-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:40:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.138	J	0.0647	MDL	0.216	PQL	mg/Kg	UJ	Q, B
CHROMIUM	26.6		0.129	MDL	0.431	PQL	mg/Kg	J	Q, A
COPPER	13.8		0.0711	MDL	0.431	PQL	mg/Kg	J	A
LEAD	23.0		0.0112	MDL	0.216	PQL	mg/Kg	J	Q
SILVER	0.0760	J	0.0129	MDL	0.108	PQL	mg/Kg	J	Z
VANADIUM	44.9		0.0237	MDL	0.108	PQL	mg/Kg	J	A

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: DUP06-SA8N-QC-042111 *Collected:* 4/21/2011 9:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.21	U	0.21	MDL	1.1	PQL	mg/Kg	UJ	FD

Sample ID: SL-004-SA8N-SB-4.0-5.0 *Collected:* 4/21/2011 10:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.33	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z, Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: PrepDE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: SL-005-SA8N-SB-4.0-5.0 *Collected:* 4/21/2011 11:57:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.32	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z, Q

Sample ID: SL-006-SA8N-SB-4.0-5.0 *Collected:* 4/21/2011 3:03:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.39	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z, Q

Sample ID: SL-115-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 12:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.37	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z, Q

Sample ID: SL-116-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 10:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	1.4		0.24	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-119-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.43	J	0.21	MDL	1.1	PQL	mg/Kg	J	Z, Q, FD

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: DUP06-SA8N-QC-042111 *Collected:* 4/21/2011 9:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0221	J	0.0029	MDL	0.0997	PQL	mg/Kg	J	Z

Sample ID: SL-004-SA8N-SB-9.0-10.0 *Collected:* 4/21/2011 10:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0071	J	0.0030	MDL	0.105	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: PrepDE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: SL-005-SA8N-SB-4.0-5.0 *Collected:* 4/21/2011 11:57:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0109	J	0.0033	MDL	0.114	PQL	mg/Kg	J	Z

Sample ID: SL-005-SA8N-SB-8.0-9.0 *Collected:* 4/21/2011 12:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0112	J	0.0031	MDL	0.108	PQL	mg/Kg	J	Z

Sample ID: SL-006-SA8N-SB-4.0-5.0 *Collected:* 4/21/2011 3:03:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0087	J	0.0033	MDL	0.114	PQL	mg/Kg	J	Z

Sample ID: SL-111-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 1:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0178	J	0.0031	MDL	0.110	PQL	mg/Kg	J	Z

Sample ID: SL-112-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 1:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0066	J	0.0031	MDL	0.109	PQL	mg/Kg	J	Z

Sample ID: SL-115-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 12:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0172	J	0.0031	MDL	0.110	PQL	mg/Kg	J	Z

Sample ID: SL-116-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 10:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0755	J	0.0032	MDL	0.112	PQL	mg/Kg	J	Z

Sample ID: SL-117-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0181	J	0.0029	MDL	0.103	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: PrepDE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: SL-118-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0315	J	0.0031	MDL	0.109	PQL	mg/Kg	J	Z

Sample ID: SL-119-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0190	J	0.0029	MDL	0.101	PQL	mg/Kg	J	Z

Sample ID: SL-125-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 2:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0288	J	0.0033	MDL	0.114	PQL	mg/Kg	J	Z

Sample ID: SL-126-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0347	J	0.0030	MDL	0.106	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 1625C **Matrix: SO**

Sample ID: SL-112-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 1:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	34.5	J	19.0	MDL	38.0	PQL	ng/Kg	J	Z

Sample ID: SL-116-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 10:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	242	J	198	MDL	396	PQL	ng/Kg	J	Z

Sample ID: SL-119-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	101		17.7	MDL	35.4	PQL	ng/Kg	J	Q, Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 Laboratory: LL

EDD Filename: PrepDE134_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA **Method:** 1625C **Matrix:** SO

Sample ID: SL-125-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 2:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	254	J	204	MDL	408	PQL	ng/Kg	J	Z

Method Category: SVOA **Method:** 8015M **Matrix:** SO

Sample ID: SL-116-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 10:20:00 *Analysis Type:* REA2 *Dilution:* 25

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	13	J	12	MDL	36	PQL	mg/Kg	J	Z

Sample ID: SL-119-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:00:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	2.8		0.43	MDL	1.3	PQL	mg/Kg	J	Q, Q

Sample ID: SL-125-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 2:00:00 *Analysis Type:* REA2 *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	5.6	J	2.5	MDL	7.4	PQL	mg/Kg	J	Z

Method Category: SVOA **Method:** 8082 **Matrix:** SO

Sample ID: DUP06-SA8N-QC-042111 *Collected:* 4/21/2011 9:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	1.3	J	0.71	MDL	3.6	PQL	ug/Kg	J	Z
AROCLOR 1260	1.6	J	0.83	MDL	3.6	PQL	ug/Kg	J	Z
Aroclor 5460	2.1	U	2.1	MDL	7.1	PQL	ug/Kg	UJ	FD

Sample ID: SL-111-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 1:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	3.3	J	0.88	MDL	3.8	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: PrepDE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: SL-117-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	1.9	J	1.1	MDL	3.5	PQL	ug/Kg	J	Z

Sample ID: SL-118-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	5.7		0.39	MDL	2.0	PQL	ug/Kg	J	*#
AROCLOR 1260	2.8		0.46	MDL	2.0	PQL	ug/Kg	J	*#

Sample ID: SL-119-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	0.82	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z
AROCLOR 1260	0.96	J	0.42	MDL	1.8	PQL	ug/Kg	J	Z
Aroclor 5460	4.0		1.1	MDL	3.5	PQL	ug/Kg	J	FD

Sample ID: SL-125-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 2:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	2.0	J	0.47	MDL	2.1	PQL	ug/Kg	J	Z

Sample ID: SL-126-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	3.8		0.43	MDL	1.9	PQL	ug/Kg	J	*#

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: DUP06-SA8N-QC-042111 *Collected:* 4/21/2011 9:05:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	350	U	350	MDL	1100	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	57	J	18	MDL	350	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory:** LL

EDD Filename: PrepDE134_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-004-SA8N-SB-4.0-5.0 *Collected:* 4/21/2011 10:25:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	390	U	390	MDL	1200	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	23	J	19	MDL	390	PQL	ug/Kg	J	Z

Sample ID: SL-004-SA8N-SB-9.0-10.0 *Collected:* 4/21/2011 10:35:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	370	U	370	MDL	1100	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	24	J	19	MDL	370	PQL	ug/Kg	J	Z

Sample ID: SL-005-SA8N-SB-4.0-5.0 *Collected:* 4/21/2011 11:57:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	380	U	380	MDL	1100	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	21	J	19	MDL	380	PQL	ug/Kg	J	Z

Sample ID: SL-005-SA8N-SB-8.0-9.0 *Collected:* 4/21/2011 12:30:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	370	U	370	MDL	1100	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	26	J	18	MDL	370	PQL	ug/Kg	J	Z

Sample ID: SL-006-SA8N-SB-4.0-5.0 *Collected:* 4/21/2011 3:03:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	400	U	400	MDL	1200	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	20	J	20	MDL	400	PQL	ug/Kg	J	Z

Sample ID: SL-006-SA8N-SB-8.0-9.0 *Collected:* 4/21/2011 3:10:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	390	U	390	MDL	1200	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	24	J	19	MDL	390	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: PrepDE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-111-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 1:40:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	370	U	370	MDL	1100	PQL	ug/Kg	UJ	L
4,6-DINITRO-2-METHYLPHENOL	190	U	190	MDL	560	PQL	ug/Kg	UJ	C
BIS(2-ETHYLHEXYL)PHTHALATE	36	J	19	MDL	370	PQL	ug/Kg	J	Z

Sample ID: SL-112-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 1:15:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	380	U	380	MDL	1100	PQL	ug/Kg	UJ	L
4,6-DINITRO-2-METHYLPHENOL	190	U	190	MDL	560	PQL	ug/Kg	UJ	C
BIS(2-ETHYLHEXYL)PHTHALATE	28	J	19	MDL	380	PQL	ug/Kg	J	Z

Sample ID: SL-115-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 12:40:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	370	U	370	MDL	1100	PQL	ug/Kg	UJ	L
4,6-DINITRO-2-METHYLPHENOL	190	U	190	MDL	560	PQL	ug/Kg	UJ	C
BIS(2-ETHYLHEXYL)PHTHALATE	20	J	19	MDL	370	PQL	ug/Kg	J	Z

Sample ID: SL-116-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 10:20:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	400	U	400	MDL	1200	PQL	ug/Kg	UJ	L
4,6-DINITRO-2-METHYLPHENOL	200	U	200	MDL	590	PQL	ug/Kg	UJ	C
BIS(2-ETHYLHEXYL)PHTHALATE	33	J	20	MDL	400	PQL	ug/Kg	J	Z

Sample ID: SL-117-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:20:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	350	U	350	MDL	1000	PQL	ug/Kg	UJ	L
BENZO(B)FLUORANTHENE	17	J	17	MDL	170	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	24	J	17	MDL	170	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	34	J	17	MDL	350	PQL	ug/Kg	J	Z
CHRYSENE	31	J	17	MDL	170	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: PrepDE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-118-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:55:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	390	U	390	MDL	1200	PQL	ug/Kg	UJ	L
BENZO(B)FLUORANTHENE	26	J	19	MDL	190	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	23	J	19	MDL	190	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	46	J	19	MDL	390	PQL	ug/Kg	J	Z
CHRYSENE	39	J	19	MDL	190	PQL	ug/Kg	J	Z
FLUORANTHENE	23	J	19	MDL	190	PQL	ug/Kg	J	Z
PYRENE	27	J	19	MDL	190	PQL	ug/Kg	J	Z, L

Sample ID: SL-119-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:00:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	350	U	350	MDL	1100	PQL	ug/Kg	UJ	L
4,6-DINITRO-2-METHYLPHENOL	180	U	180	MDL	530	PQL	ug/Kg	UJ	C
BENZIDINE	1200	U	1200	MDL	3500	PQL	ug/Kg	R	Q

Sample ID: SL-125-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 2:00:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	400	U	400	MDL	1200	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	48	J	20	MDL	400	PQL	ug/Kg	J	Z

Sample ID: SL-126-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:40:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	370	U	370	MDL	1100	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	50	J	18	MDL	370	PQL	ug/Kg	J	Z
Butylbenzylphthalate	26	J	18	MDL	180	PQL	ug/Kg	J	Z, L

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: DUP06-SA8N-QC-042111 *Collected:* 4/21/2011 9:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	0.79	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z, FD

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: PrepDE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: DUP06-SA8N-QC-042111 *Collected:* 4/21/2011 9:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	0.94	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z, FD
BENZO(B)FLUORANTHENE	2.0		0.71	MDL	1.8	PQL	ug/Kg	J	C
BENZO(G,H,I)PERYLENE	0.97	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z, FD
BENZO(K)FLUORANTHENE	0.75	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
Butylbenzylphthalate	13	J	6.4	MDL	19	PQL	ug/Kg	J	Z, FD
CHRYSENE	1.4	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z
Diethylphthalate	6.4	U	6.4	MDL	19	PQL	ug/Kg	UJ	FD
Di-n-octylphthalate	6.4	U	6.4	MDL	19	PQL	ug/Kg	UJ	C
FLUORANTHENE	1.6	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	0.71	U	0.71	MDL	1.8	PQL	ug/Kg	UJ	FD
PHENANTHRENE	0.87	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
PYRENE	1.3	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-004-SA8N-SB-4.0-5.0 *Collected:* 4/21/2011 10:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.78	U	0.78	MDL	2.0	PQL	ug/Kg	UJ	C
Di-n-octylphthalate	7.0	U	7.0	MDL	21	PQL	ug/Kg	UJ	C

Sample ID: SL-004-SA8N-SB-9.0-10.0 *Collected:* 4/21/2011 10:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.74	U	0.74	MDL	1.9	PQL	ug/Kg	UJ	C
Di-n-octylphthalate	6.7	U	6.7	MDL	20	PQL	ug/Kg	UJ	C

Sample ID: SL-005-SA8N-SB-4.0-5.0 *Collected:* 4/21/2011 11:57:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.77	U	0.77	MDL	1.9	PQL	ug/Kg	UJ	C
Di-n-octylphthalate	6.9	U	6.9	MDL	21	PQL	ug/Kg	UJ	C

Sample ID: SL-005-SA8N-SB-8.0-9.0 *Collected:* 4/21/2011 12:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.75	U	0.75	MDL	1.9	PQL	ug/Kg	UJ	C

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: PrepDE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-005-SA8N-SB-8.0-9.0 *Collected:* 4/21/2011 12:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Di-n-octylphthalate	6.7	U	6.7	MDL	20	PQL	ug/Kg	UJ	C

Sample ID: SL-006-SA8N-SB-4.0-5.0 *Collected:* 4/21/2011 3:03:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.80	U	0.80	MDL	2.0	PQL	ug/Kg	UJ	C
Di-n-octylphthalate	7.2	U	7.2	MDL	22	PQL	ug/Kg	UJ	C

Sample ID: SL-006-SA8N-SB-8.0-9.0 *Collected:* 4/21/2011 3:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.78	U	0.78	MDL	2.0	PQL	ug/Kg	UJ	C
Di-n-octylphthalate	7.0	U	7.0	MDL	21	PQL	ug/Kg	UJ	C

Sample ID: SL-111-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 1:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	5.1	J	3.7	MDL	9.3	PQL	ug/Kg	J	Z, C
BENZO(G,H,I)PERYLENE	4.0	J	3.7	MDL	9.3	PQL	ug/Kg	J	Z
CHRYSENE	4.3	J	1.9	MDL	9.3	PQL	ug/Kg	J	Z
FLUORANTHENE	5.1	J	3.7	MDL	9.3	PQL	ug/Kg	J	Z
PYRENE	3.8	J	3.7	MDL	9.3	PQL	ug/Kg	J	Z

Sample ID: SL-112-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 1:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	1.0	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z, C
CHRYSENE	0.95	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z
Di-n-octylphthalate	6.8	U	6.8	MDL	20	PQL	ug/Kg	UJ	C
FLUORANTHENE	0.93	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
FLUORENE	0.82	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
NAPHTHALENE	1.1	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z
PHENANTHRENE	0.76	J	0.75	MDL	1.9	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: PrepDE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-115-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 12:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	2.1	J	1.9	MDL	9.3	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	220		3.7	MDL	9.3	PQL	ug/Kg	J	C

Sample ID: SL-116-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 10:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	4.6	J	2.0	MDL	10	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	24		4.0	MDL	10	PQL	ug/Kg	J	C
BENZO(K)FLUORANTHENE	8.1	J	4.0	MDL	10	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	4.1	J	4.0	MDL	10	PQL	ug/Kg	J	Z
FLUORENE	5.1	J	4.0	MDL	10	PQL	ug/Kg	J	Z

Sample ID: SL-117-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	5.4	J	3.5	MDL	8.7	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	7.8	J	3.5	MDL	8.7	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	3.6	J	3.5	MDL	8.7	PQL	ug/Kg	J	Z
FLUORANTHENE	6.1	J	3.5	MDL	8.7	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	4.0	J	3.5	MDL	8.7	PQL	ug/Kg	J	Z
PYRENE	6.1	J	3.5	MDL	8.7	PQL	ug/Kg	J	Z

Sample ID: SL-118-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	6.0	J	3.9	MDL	9.7	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	9.0	J	3.9	MDL	9.7	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	3.9	J	3.9	MDL	9.7	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	5.2	J	3.9	MDL	9.7	PQL	ug/Kg	J	Z

Sample ID: SL-119-SA8N-SS-0.0-0.5 *Collected:* 4/21/2011 9:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	1.4	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z, FD
BENZO(A)PYRENE	1.8	J	0.71	MDL	1.8	PQL	ug/Kg	J	FD

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory:** LL

EDD Filename: PrepDE134_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: SL-119-SA8N-SS-0.0-0.5 ***Collected:*** 4/21/2011 9:00:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	2.6		0.71	MDL	1.8	PQL	ug/Kg	J	C
BENZO(G,H,I)PERYLENE	1.8		0.71	MDL	1.8	PQL	ug/Kg	J	FD
BENZO(K)FLUORANTHENE	0.75	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
Butylbenzylphthalate	6.4	U	6.4	MDL	19	PQL	ug/Kg	UJ	FD
Diethylphthalate	8.9	J	6.4	MDL	19	PQL	ug/Kg	J	Z, Q, FD
Di-n-octylphthalate	6.4	U	6.4	MDL	19	PQL	ug/Kg	UJ	C
INDENO(1,2,3-CD)PYRENE	1.0	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z, FD
PHENANTHRENE	1.4	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
PYRENE	1.7	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-125-SA8N-SS-0.0-0.5 ***Collected:*** 4/21/2011 2:00:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	1.4	J	0.81	MDL	2.0	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	4.2		0.81	MDL	2.0	PQL	ug/Kg	J	C
BENZO(G,H,I)PERYLENE	1.9	J	0.81	MDL	2.0	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	1.5	J	0.81	MDL	2.0	PQL	ug/Kg	J	Z
Di-n-butylphthalate	7.5	J	7.3	MDL	22	PQL	ug/Kg	J	Z
Di-n-octylphthalate	7.3	U	7.3	MDL	22	PQL	ug/Kg	UJ	C
INDENO(1,2,3-CD)PYRENE	1.4	J	0.81	MDL	2.0	PQL	ug/Kg	J	Z
NAPHTHALENE	1.8	J	0.81	MDL	2.0	PQL	ug/Kg	J	Z

Sample ID: SL-126-SA8N-SS-0.0-0.5 ***Collected:*** 4/21/2011 9:40:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	0.40	J	0.37	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	5.0		0.73	MDL	1.8	PQL	ug/Kg	J	C
Di-n-octylphthalate	6.6	U	6.6	MDL	20	PQL	ug/Kg	UJ	C
NAPHTHALENE	1.2	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory:** LL

EDD Filename: PrepDE134_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8315A **Matrix:** SO

Sample ID: SL-111-SA8N-SS-0.0-0.5 ***Collected:*** 4/21/2011 1:40:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	1500	J	670	MDL	1700	PQL	ug/Kg	J	Z

Sample ID: SL-112-SA8N-SS-0.0-0.5 ***Collected:*** 4/21/2011 1:15:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	780	J	680	MDL	1700	PQL	ug/Kg	J	Z

Sample ID: SL-116-SA8N-SS-0.0-0.5 ***Collected:*** 4/21/2011 10:20:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	1600	J	710	MDL	1800	PQL	ug/Kg	J	Z

Sample ID: SL-117-SA8N-SS-0.0-0.5 ***Collected:*** 4/21/2011 9:20:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	1300	J	630	MDL	1600	PQL	ug/Kg	J	Z

Sample ID: SL-118-SA8N-SS-0.0-0.5 ***Collected:*** 4/21/2011 9:55:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	1100	J	710	MDL	1800	PQL	ug/Kg	J	Z

Sample ID: SL-119-SA8N-SS-0.0-0.5 ***Collected:*** 4/21/2011 9:00:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	1000	J	640	MDL	1600	PQL	ug/Kg	J	Z

Sample ID: SL-125-SA8N-SS-0.0-0.5 ***Collected:*** 4/21/2011 2:00:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	1700	J	730	MDL	1800	PQL	ug/Kg	J	Z

Sample ID: SL-126-SA8N-SS-0.0-0.5 ***Collected:*** 4/21/2011 9:40:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	870	J	660	MDL	1600	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 Laboratory: LL

EDD Filename: PrepDE134_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA
Method: 8315A **Matrix:** SO

Method Category: VOA
Method: 8260B **Matrix:** AQ

Sample ID: TB-042111 *Collected:* 4/21/2011 8:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROETHANE	1	U	1	MDL	5	PQL	ug/L	UJ	C
2,2-DICHLOROPROPANE	1	U	1	MDL	5	PQL	ug/L	UJ	C
BROMODICHLOROMETHANE	1	U	1	MDL	5	PQL	ug/L	UJ	C
CARBON TETRACHLORIDE	1	U	1	MDL	5	PQL	ug/L	UJ	C
DICHLORODIFLUOROMETHANE	2	U	2	MDL	5	PQL	ug/L	UJ	C

Method Category: VOA
Method: 8260B **Matrix:** SO

Sample ID: SL-004-SA8N-SB-4.0-5.0 *Collected:* 4/21/2011 10:25:00 *Analysis Type:* RES *Dilution:* 0.84

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-CHLOROETHYL VINYL ETHER	0.30	U	0.30	MDL	4.0	PQL	ug/Kg	UJ	C
BROMOCHLOROMETHANE	0.33	U	0.33	MDL	4.0	PQL	ug/Kg	UJ	C
METHYLENE CHLORIDE	0.59	J	0.24	MDL	4.0	PQL	ug/Kg	U	B

Sample ID: SL-005-SA8N-SB-4.0-5.0 *Collected:* 4/21/2011 11:57:00 *Analysis Type:* RES *Dilution:* 0.88

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-CHLOROETHYL VINYL ETHER	0.31	U	0.31	MDL	4.1	PQL	ug/Kg	UJ	C
BROMOCHLOROMETHANE	0.34	U	0.34	MDL	4.1	PQL	ug/Kg	UJ	C
METHYLENE CHLORIDE	0.44	J	0.25	MDL	4.1	PQL	ug/Kg	U	B

Sample ID: SL-006-SA8N-SB-4.0-5.0 *Collected:* 4/21/2011 3:03:00 *Analysis Type:* RES *Dilution:* 0.93

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-CHLOROETHYL VINYL ETHER	0.34	U	0.34	MDL	4.5	PQL	ug/Kg	UJ	C
BROMOCHLOROMETHANE	0.37	U	0.37	MDL	4.5	PQL	ug/Kg	UJ	C
METHYLENE CHLORIDE	0.52	J	0.27	MDL	4.5	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: PrepDE134_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*XIII	Compound Quantitation and CRQL
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: PrepDE134_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: PrepDE134_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE134

Method Blank Outlier Report

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: DE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11708CB220407	5/4/2011 4:07:00 AM	CALCIUM	7.67 mg/Kg	DUP06-SA8N-QC-042111
		PHOSPHORUS	1.17 mg/Kg	SL-004-SA8N-SB-4.0-5.0
		TIN	1.33 mg/Kg	SL-004-SA8N-SB-9.0-10.0
				SL-005-SA8N-SB-4.0-5.0
				SL-005-SA8N-SB-8.0-9.0
				SL-006-SA8N-SB-4.0-5.0
				SL-006-SA8N-SB-8.0-9.0
				SL-111-SA8N-SS-0.0-0.5
				SL-112-SA8N-SS-0.0-0.5
				SL-115-SA8N-SS-0.0-0.5
				SL-116-SA8N-SS-0.0-0.5
				SL-117-SA8N-SS-0.0-0.5
				SL-118-SA8N-SS-0.0-0.5
				SL-119-SA8N-SS-0.0-0.5
				SL-125-SA8N-SS-0.0-0.5
				SL-126-SA8N-SS-0.0-0.5

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP06-SA8N-QC-042111(RES)	TIN	2.53 mg/Kg	2.53U mg/Kg
SL-004-SA8N-SB-4.0-5.0(RES)	TIN	2.88 mg/Kg	2.88U mg/Kg
SL-004-SA8N-SB-9.0-10.0(RES)	TIN	2.42 mg/Kg	2.42U mg/Kg
SL-005-SA8N-SB-4.0-5.0(RES)	TIN	2.64 mg/Kg	2.64U mg/Kg
SL-005-SA8N-SB-8.0-9.0(RES)	TIN	2.24 mg/Kg	2.24U mg/Kg
SL-006-SA8N-SB-4.0-5.0(RES)	TIN	2.20 mg/Kg	2.20U mg/Kg
SL-006-SA8N-SB-8.0-9.0(RES)	TIN	2.78 mg/Kg	2.78U mg/Kg
SL-111-SA8N-SS-0.0-0.5(RES)	TIN	3.00 mg/Kg	3.00U mg/Kg
SL-112-SA8N-SS-0.0-0.5(RES)	TIN	2.67 mg/Kg	2.67U mg/Kg
SL-115-SA8N-SS-0.0-0.5(RES)	TIN	2.68 mg/Kg	2.68U mg/Kg
SL-116-SA8N-SS-0.0-0.5(RES)	TIN	2.40 mg/Kg	2.40U mg/Kg
SL-117-SA8N-SS-0.0-0.5(RES)	TIN	2.64 mg/Kg	2.64U mg/Kg
SL-118-SA8N-SS-0.0-0.5(RES)	TIN	2.94 mg/Kg	2.94U mg/Kg
SL-119-SA8N-SS-0.0-0.5(RES)	TIN	2.63 mg/Kg	2.63U mg/Kg
SL-125-SA8N-SS-0.0-0.5(RES)	TIN	2.53 mg/Kg	2.53U mg/Kg
SL-126-SA8N-SS-0.0-0.5(RES)	TIN	2.32 mg/Kg	2.32U mg/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: DE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11726CB221215A	5/2/2011 12:15:00 PM	ANTIMONY COPPER VANADIUM	0.0810 mg/Kg 0.394 mg/Kg 0.0871 mg/Kg	DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0 SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP06-SA8N-QC-042111(RES)	ANTIMONY	0.110 mg/Kg	0.110U mg/Kg
SL-004-SA8N-SB-4.0-5.0(RES)	ANTIMONY	0.107 mg/Kg	0.107U mg/Kg
SL-006-SA8N-SB-4.0-5.0(RES)	ANTIMONY	0.118 mg/Kg	0.118U mg/Kg
SL-006-SA8N-SB-8.0-9.0(RES)	ANTIMONY	0.129 mg/Kg	0.129U mg/Kg
SL-111-SA8N-SS-0.0-0.5(RES)	ANTIMONY	0.116 mg/Kg	0.116U mg/Kg
SL-112-SA8N-SS-0.0-0.5(RES)	ANTIMONY	0.104 mg/Kg	0.104U mg/Kg
SL-115-SA8N-SS-0.0-0.5(RES)	ANTIMONY	0.129 mg/Kg	0.129U mg/Kg
SL-116-SA8N-SS-0.0-0.5(RES)	ANTIMONY	0.165 mg/Kg	0.165U mg/Kg
SL-117-SA8N-SS-0.0-0.5(RES)	ANTIMONY	0.0883 mg/Kg	0.0883U mg/Kg
SL-118-SA8N-SS-0.0-0.5(RES)	ANTIMONY	0.113 mg/Kg	0.113U mg/Kg
SL-119-SA8N-SS-0.0-0.5(RES)	ANTIMONY	0.143 mg/Kg	0.143U mg/Kg
SL-125-SA8N-SS-0.0-0.5(RES)	ANTIMONY	0.152 mg/Kg	0.152U mg/Kg
SL-126-SA8N-SS-0.0-0.5(RES)	ANTIMONY	0.138 mg/Kg	0.138U mg/Kg

Method: 8260B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB38B210138A	4/27/2011 1:38:00 AM	METHYLENE CHLORIDE TOLUENE	0.46 ug/Kg 0.08 ug/Kg	SL-004-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-4.0-5.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-004-SA8N-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	0.59 ug/Kg	4.0U ug/Kg
SL-005-SA8N-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	0.44 ug/Kg	4.1U ug/Kg
SL-006-SA8N-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	0.52 ug/Kg	4.5U ug/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: DE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-119-SA8N-SS-0.0-0.5MSD (SL-119-SA8N-SS-0.0-0.5)	EFH (C15-C20) EFH (C21-C30) EFH (C30-C40)	- - -	186 1098 1367	49.00-123.00 49.00-123.00 49.00-123.00	29 (20.00) 89 (20.00) 69 (20.00)	EFH (C15-C20) EFH (C21-C30) EFH (C30-C40)	J (all detects) EFH (C21-C30) and (C30-C40), No Qual, >4x

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-119-SA8N-SS-0.0-0.5MS SL-119-SA8N-SS-0.0-0.5MSD (DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0 SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5)	CHROMIUM LEAD ZINC	133 - -	- 140 127	75.00-125.00 75.00-125.00 75.00-125.00	- - -	CHROMIUM LEAD ZINC	J(all detects) Zn, No Qual, >4x
SL-119-SA8N-SS-0.0-0.5MS SL-119-SA8N-SS-0.0-0.5MSD (DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0 SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5)	ANTIMONY	42	33	75.00-125.00	-	ANTIMONY	J(all detects) UJ(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: DE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-119-SA8N-SS-0.0-0.5MS SL-119-SA8N-SS-0.0-0.5MSD (DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0 SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5)	BARIUM	255	134	75.00-125.00	-	BARIUM	No Qual, >4x

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-119-SA8N-SS-0.0-0.5MS	ALUMINUM	950	718	75.00-125.00	-	ALUMINUM	
SL-119-SA8N-SS-0.0-0.5MSD	POTASSIUM	126	-	75.00-125.00	-	POTASSIUM	
(DUP06-SA8N-QC-042111	TITANIUM	220	210	75.00-125.00	-	TITANIUM	
SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0 SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5)							J(all detects) Al, Ti, No Qual, >4x
SL-119-SA8N-SS-0.0-0.5MS	IRON	246	-498	75.00-125.00	-	IRON	
SL-119-SA8N-SS-0.0-0.5MSD	MAGNESIUM	135	-11	75.00-125.00	-	MAGNESIUM	
(DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0 SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5)							No Qual, >4x

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: DE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-119-SA8N-SS-0.0-0.5MS SL-119-SA8N-SS-0.0-0.5MSD (DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0 SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5)	MANGANESE	66	61	75.00-125.00	-	MANGANESE	No Qual, >4x

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-119-SA8N-SS-0.0-0.5MS SL-119-SA8N-SS-0.0-0.5MSD (SL-119-SA8N-SS-0.0-0.5)	4-CHLOROANILINE	-	-	23.00-95.00	40 (30.00)	4-CHLOROANILINE	J(all detects)
	Di-n-butylphthalate	-	-	67.00-123.00	35 (30.00)	Di-n-butylphthalate	
	HEXACHLOROETHANE	-	-	57.00-109.00	31 (30.00)	HEXACHLOROETHANE	
	NITROBENZENE	118	123	72.00-106.00	-	NITROBENZENE	
	N-NITROSODIMETHYLAMINE	-	-	47.00-116.00	69 (30.00)	N-NITROSODIMETHYLAMINE	
SL-119-SA8N-SS-0.0-0.5MS SL-119-SA8N-SS-0.0-0.5MSD (SL-119-SA8N-SS-0.0-0.5)	BENZIDINE	0	0	35.00-141.00	-	BENZIDINE	J(all detects) R(all non-detects)

Method: 1625C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-119-SA8N-SS-0.0-0.5MSD (SL-119-SA8N-SS-0.0-0.5)	N-NITROSODIMETHYLAMINE	-	68	70.00-130.00	35 (30.00)	N-NITROSODIMETHYLAMINE	J(all detects) UJ(all non-detects)

Method: 8270C SIM
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-119-SA8N-SS-0.0-0.5MS SL-119-SA8N-SS-0.0-0.5MSD (SL-119-SA8N-SS-0.0-0.5)	Diethylphthalate	67	66	70.00-136.00	-	Diethylphthalate	J(all detects) UJ(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: DE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-119-SA8N-SS-0.0-0.5MS (DUP06-SA8N-QC-042111 SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5)	FLUORIDE	64	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)
SL-004-SA8N-SB-4.0-5.0MS (SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0)	FLUORIDE	48	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)

Method: 7199
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-119-SA8N-SS-0.0-0.5MS (DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0 SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5)	HEXAVALENT CHROMIUM	131	-	75.00-125.00	-	HEXAVALENT CHROMIUM	J(all detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: DE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-119-SA8N-SS-0.0-0.5DUP (DUP06-SA8N-QC-042111 SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5)	Nitrate-NO3	30	20.00	No Qual, OK by Difference

Method: 6010B
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-119-SA8N-SS-0.0-0.5DUP (DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0 SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5)	Zirconium	200	20.00	No Qual, OK by Difference

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: DE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-119-SA8N-SS-0.0-0.5DUP	ANTIMONY	75	20.00	
(DUP06-SA8N-QC-042111	MOLYBDENUM	25	20.00	
SL -004-SA8N-SB-4.0-5.0	SELENIUM	29	20.00	
SL -004-SA8N-SB-9.0-10.0	SILVER	55	20.00	
SL -005-SA8N-SB-4.0-5.0				
SL -005-SA8N-SB-8.0-9.0				
SL -006-SA8N-SB-4.0-5.0				
SL -006-SA8N-SB-8.0-9.0				
SL -111-SA8N-SS-0.0-0.5				No Qual, OK by Difference
SL -112-SA8N-SS-0.0-0.5				
SL -115-SA8N-SS-0.0-0.5				
SL -116-SA8N-SS-0.0-0.5				
SL -117-SA8N-SS-0.0-0.5				
SL -118-SA8N-SS-0.0-0.5				
SL -119-SA8N-SS-0.0-0.5				
SL -125-SA8N-SS-0.0-0.5				
SL -126-SA8N-SS-0.0-0.5)				

Method: 7199
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-119-SA8N-SS-0.0-0.5DUP	HEXAVALENT CHROMIUM	200	20.00	
(DUP06-SA8N-QC-042111				
SL -004-SA8N-SB-4.0-5.0				
SL -004-SA8N-SB-9.0-10.0				
SL -005-SA8N-SB-4.0-5.0				
SL -005-SA8N-SB-8.0-9.0				
SL -006-SA8N-SB-4.0-5.0				
SL -006-SA8N-SB-8.0-9.0				
SL -111-SA8N-SS-0.0-0.5				No Qual, OK by Difference
SL -112-SA8N-SS-0.0-0.5				
SL -115-SA8N-SS-0.0-0.5				
SL -116-SA8N-SS-0.0-0.5				
SL -117-SA8N-SS-0.0-0.5				
SL -118-SA8N-SS-0.0-0.5				
SL -119-SA8N-SS-0.0-0.5				
SL -125-SA8N-SS-0.0-0.5				
SL -126-SA8N-SS-0.0-0.5)				

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: DE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8260B
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS1Y32Q211104A	1,2-DICHLOROETHANE	131	-	70.00-130.00	-	1,2-DICHLOROETHANE	J(all detects)
LCS1Y32Y211125A	2-Chloro-1,1,1-trifluoroethane	132	132	77.00-120.00	-	2-Chloro-1,1,1-trifluoroethane	
LCSY32Q211001A	BROMOMETHANE	121	125	44.00-120.00	-	BROMOMETHANE	
LCSY32Y211043A	CHLOROMETHANE	-	139	60.00-129.00	-	CHLOROMETHANE	
(TB-042111)	DICHLORODIFLUOROMETHAN	123	122	47.00-120.00	-	DICHLORODIFLUOROMETHA	
	VINYL CHLORIDE	-	127	65.00-125.00	-	VINYL CHLORIDE	

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11726CQ221219A	ANTIMONY	63	-	80.00-120.00	-	ANTIMONY	No Qual, SRM within QC Limits
(DUP06-SA8N-QC-042111							
SL-004-SA8N-SB-4.0-5.0							
SL-004-SA8N-SB-9.0-10.0							
SL-005-SA8N-SB-4.0-5.0							
SL-005-SA8N-SB-8.0-9.0							
SL-006-SA8N-SB-4.0-5.0							
SL-006-SA8N-SB-8.0-9.0							
SL-111-SA8N-SS-0.0-0.5							
SL-112-SA8N-SS-0.0-0.5							
SL-115-SA8N-SS-0.0-0.5							
SL-116-SA8N-SS-0.0-0.5							
SL-117-SA8N-SS-0.0-0.5							
SL-118-SA8N-SS-0.0-0.5							
SL-119-SA8N-SS-0.0-0.5							
SL-125-SA8N-SS-0.0-0.5							
SL-126-SA8N-SS-0.0-0.5)							

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P9LALCSQ261028	1-METHYLNAPHTHALENE	131	-	74.00-105.00	-	1-METHYLNAPHTHALENE	J(all detects)
(DUP06-SA8N-QC-042111	2-METHYLNAPHTHALENE	116	-	76.00-105.00	-	2-METHYLNAPHTHALENE	
SL-004-SA8N-SB-4.0-5.0	Butylbenzylphthalate	136	-	75.00-115.00	-	Butylbenzylphthalate	
SL-004-SA8N-SB-9.0-10.0	PYRENE	154	-	75.00-115.00	-	PYRENE	
SL-005-SA8N-SB-4.0-5.0							
SL-005-SA8N-SB-8.0-9.0							
SL-006-SA8N-SB-4.0-5.0							
SL-006-SA8N-SB-8.0-9.0							
SL-111-SA8N-SS-0.0-0.5							
SL-112-SA8N-SS-0.0-0.5							
SL-115-SA8N-SS-0.0-0.5							
SL-116-SA8N-SS-0.0-0.5							
SL-117-SA8N-SS-0.0-0.5							
SL-118-SA8N-SS-0.0-0.5							
SL-119-SA8N-SS-0.0-0.5							
SL-125-SA8N-SS-0.0-0.5							
SL-126-SA8N-SS-0.0-0.5)							

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: DE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8270C**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*LCS %R*	*LCSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
P9LALCSQ261028 (DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0 SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5)	2,4-DINITROPHENOL	35	-	37.00-120.00	-	2,4-DINITROPHENOL	J(all detects) UJ(all non-detects)

Surrogate Outlier Report

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: DE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8270C SIM**
Matrix: **SO**

Sample ID	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-111-SA8N-SS-0.0-0.5	2-FLUOROBIPHENYL Nitrobenzene-d5 Terphenyl-d14	145 139 136	45.00-130.00 40.00-130.00 45.00-135.00	All Base/Neutral Target Analytes	No Qual, Diluted Out
SL-115-SA8N-SS-0.0-0.5	2-FLUOROBIPHENYL Nitrobenzene-d5 Terphenyl-d14	143 136 149	45.00-130.00 40.00-130.00 45.00-135.00	All Base/Neutral Target Analytes	No Qual, Diluted Out
SL-116-SA8N-SS-0.0-0.5	2-FLUOROBIPHENYL Nitrobenzene-d5 Terphenyl-d14	143 146 142	45.00-130.00 40.00-130.00 45.00-135.00	All Base/Neutral Target Analytes	No Qual, Diluted Out
SL-117-SA8N-SS-0.0-0.5	2-FLUOROBIPHENYL Nitrobenzene-d5 Terphenyl-d14	147 154 158	45.00-130.00 40.00-130.00 45.00-135.00	All Base/Neutral Target Analytes	No Qual, Diluted Out
SL-118-SA8N-SS-0.0-0.5	2-FLUOROBIPHENYL Nitrobenzene-d5 Terphenyl-d14	133 151 150	45.00-130.00 40.00-130.00 45.00-135.00	All Base/Neutral Target Analytes	No Qual, Diluted Out

Field Duplicate RPD Report

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: DE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-119-SA8N-SS-0.0-0.5	DUP06-SA8N-QC-042111			
MOISTURE	6.4	6.8	6		No Qualifiers Applied

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-119-SA8N-SS-0.0-0.5	DUP06-SA8N-QC-042111			
FLUORIDE	1.4	1.9	30	50.00	No Qualifiers Applied

Method: 6010B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-119-SA8N-SS-0.0-0.5	DUP06-SA8N-QC-042111			
ALUMINUM	15200	14600	4	50.00	
BORON	3.66	3.04	19	50.00	
CALCIUM	3370	3270	3	50.00	
IRON	22400	22000	2	50.00	
LITHIUM	27.5	26.2	5	50.00	
MAGNESIUM	6160	6220	1	50.00	
MANGANESE	311	301	3	50.00	No Qualifiers Applied
PHOSPHORUS	485	459	6	50.00	
POTASSIUM	3760	3680	2	50.00	
SODIUM	89.8	82.1	9	50.00	
STRONTIUM	16.8	15.7	7	50.00	
TIN	2.63	2.53	4	50.00	
TITANIUM	1220	1190	2	50.00	

Method: 6020
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-119-SA8N-SS-0.0-0.5	DUP06-SA8N-QC-042111			
ANTIMONY	0.143	0.110	26	50.00	
ARSENIC	5.13	5.09	1	50.00	
BARIUM	95.2	110	14	50.00	
BERYLLIUM	0.519	0.547	5	50.00	
CADMIUM	0.128	0.178	33	50.00	
CHROMIUM	23.5	26.2	11	50.00	
COBALT	6.61	8.11	20	50.00	
COPPER	10.1	11.9	16	50.00	
LEAD	7.08	8.66	20	50.00	No Qualifiers Applied
MOLYBDENUM	0.452	0.449	1	50.00	
NICKEL	13.9	16.7	18	50.00	
SELENIUM	0.171	0.166	3	50.00	
SILVER	0.0481	0.0469	3	50.00	
THALLIUM	0.266	0.270	1	50.00	
VANADIUM	39.4	43.7	10	50.00	
ZINC	61.1	70.2	14	50.00	

Field Duplicate RPD Report

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: DE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7199
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-119-SA8N-SS-0.0-0.5	DUP06-SA8N-QC-042111			
HEXAVALENT CHROMIUM	0.43	1.1 U	200	50.00	J(all detects) UJ(all non-detects)

Method: 7471A
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-119-SA8N-SS-0.0-0.5	DUP06-SA8N-QC-042111			
MERCURY	0.0190	0.0221	15	50.00	No Qualifiers Applied

Method: 8082
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-119-SA8N-SS-0.0-0.5	DUP06-SA8N-QC-042111			
AROCLOR 1254	0.82	1.3	45	50.00	No Qualifiers Applied
AROCLOR 1260	0.96	1.6	50	50.00	
Aroclor 5460	4.0	7.1 U	200	50.00	J(all detects) UJ(all non-detects)

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-119-SA8N-SS-0.0-0.5	DUP06-SA8N-QC-042111			
BENZO(B)FLUORANTHENE	2.6	2.0	26	50.00	No Qualifiers Applied
BENZO(K)FLUORANTHENE	0.75	0.75	0	50.00	
CHRYSENE	2.2	1.4	44	50.00	
FLUORANTHENE	2.3	1.6	36	50.00	
PHENANTHRENE	1.4	0.87	47	50.00	
PYRENE	1.7	1.3	27	50.00	
BENZO(A)ANTHRACENE	1.4	0.79	56	50.00	J(all detects) UJ(all non-detects)
BENZO(A)PYRENE	1.8	0.94	63	50.00	
BENZO(G,H,I)PERYLENE	1.8	0.97	60	50.00	
Butylbenzylphthalate	19 U	13	200	50.00	
Diethylphthalate	8.9	19 U	200	50.00	
INDENO(1,2,3-CD)PYRENE	1.0	1.8 U	200	50.00	

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-119-SA8N-SS-0.0-0.5	DUP06-SA8N-QC-042111			
PH	6.83	6.93	1	50.00	No Qualifiers Applied

Field Duplicate RPD Report

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: DE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method: ASTM D1498
Matrix: SO

Analyte	Concentration (mV)		Sample RPD	eQAPP RPD	Flag
	SL-119-SA8N-SS-0.0-0.5	DUP06-SA8N-QC-042111			
Oxidation Reduction Potential	389	470	19		No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: DE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1625C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-112-SA8N-SS-0.0-0.5	N-NITROSODIMETHYLAMINE	J	34.5	38.0	PQL	ng/Kg	J (all detects)
SL-116-SA8N-SS-0.0-0.5	N-NITROSODIMETHYLAMINE	J	242	396	PQL	ng/Kg	J (all detects)
SL-125-SA8N-SS-0.0-0.5	N-NITROSODIMETHYLAMINE	J	254	408	PQL	ng/Kg	J (all detects)

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-119-SA8N-SS-0.0-0.5	Nitrate-NO3	J	1.5	1.6	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP06-SA8N-QC-042111	BORON	J	3.04	5.31	PQL	mg/Kg	J (all detects)
	SODIUM	J	82.1	106	PQL	mg/Kg	
	TIN	J	2.53	10.6	PQL	mg/Kg	
SL-004-SA8N-SB-4.0-5.0	TIN	J	2.88	11.7	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.97	5.87	PQL	mg/Kg	
SL-004-SA8N-SB-9.0-10.0	BORON	J	3.68	5.53	PQL	mg/Kg	J (all detects)
	SODIUM	J	106	111	PQL	mg/Kg	
	TIN	J	2.42	11.1	PQL	mg/Kg	
	Zirconium	J	1.87	5.53	PQL	mg/Kg	
SL-005-SA8N-SB-4.0-5.0	TIN	J	2.64	11.5	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.60	5.73	PQL	mg/Kg	
SL-005-SA8N-SB-8.0-9.0	BORON	J	2.35	5.48	PQL	mg/Kg	J (all detects)
	TIN	J	2.24	11.0	PQL	mg/Kg	
	Zirconium	J	1.25	5.48	PQL	mg/Kg	
SL-006-SA8N-SB-4.0-5.0	BORON	J	5.77	5.97	PQL	mg/Kg	J (all detects)
	TIN	J	2.20	11.9	PQL	mg/Kg	
	Zirconium	J	2.47	5.97	PQL	mg/Kg	
SL-006-SA8N-SB-8.0-9.0	BORON	J	4.57	5.89	PQL	mg/Kg	J (all detects)
	TIN	J	2.78	11.8	PQL	mg/Kg	
	Zirconium	J	1.88	5.89	PQL	mg/Kg	
SL-111-SA8N-SS-0.0-0.5	SODIUM	J	80.4	111	PQL	mg/Kg	J (all detects)
	TIN	J	3.00	11.1	PQL	mg/Kg	
SL-112-SA8N-SS-0.0-0.5	BORON	J	5.43	5.54	PQL	mg/Kg	J (all detects)
	SODIUM	J	73.1	111	PQL	mg/Kg	
	TIN	J	2.67	11.1	PQL	mg/Kg	
SL-115-SA8N-SS-0.0-0.5	BORON	J	5.06	5.45	PQL	mg/Kg	J (all detects)
	SODIUM	J	80.0	109	PQL	mg/Kg	
	TIN	J	2.68	10.9	PQL	mg/Kg	
SL-116-SA8N-SS-0.0-0.5	BORON	J	5.32	6.02	PQL	mg/Kg	J (all detects)
	SODIUM	J	104	120	PQL	mg/Kg	
	TIN	J	2.40	12.0	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: DE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-117-SA8N-SS-0.0-0.5	BORON	J	4.32	5.26	PQL	mg/Kg	J (all detects)
	SODIUM	J	85.3	105	PQL	mg/Kg	
	TIN	J	2.64	10.5	PQL	mg/Kg	
SL-118-SA8N-SS-0.0-0.5	TIN	J	2.94	11.6	PQL	mg/Kg	J (all detects)
SL-119-SA8N-SS-0.0-0.5	BORON	J	3.66	5.24	PQL	mg/Kg	J (all detects)
	SODIUM	J	89.8	105	PQL	mg/Kg	
	TIN	J	2.63	10.5	PQL	mg/Kg	
SL-125-SA8N-SS-0.0-0.5	BORON	J	5.34	5.95	PQL	mg/Kg	J (all detects)
	SODIUM	J	88.0	119	PQL	mg/Kg	
	TIN	J	2.53	11.9	PQL	mg/Kg	
SL-126-SA8N-SS-0.0-0.5	BORON	J	5.02	5.55	PQL	mg/Kg	J (all detects)
	SODIUM	J	74.1	111	PQL	mg/Kg	
	TIN	J	2.32	11.1	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP06-SA8N-QC-042111	ANTIMONY	J	0.110	0.210	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.166	0.421	PQL	mg/Kg	
	SILVER	J	0.0469	0.105	PQL	mg/Kg	
SL-004-SA8N-SB-4.0-5.0	ANTIMONY	J	0.107	0.230	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0723	0.460	PQL	mg/Kg	
	SILVER	J	0.0295	0.115	PQL	mg/Kg	
SL-004-SA8N-SB-9.0-10.0	SILVER	J	0.0221	0.107	PQL	mg/Kg	J (all detects)
SL-005-SA8N-SB-4.0-5.0	SELENIUM	J	0.0886	0.441	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0528	0.110	PQL	mg/Kg	
SL-005-SA8N-SB-8.0-9.0	SELENIUM	J	0.0844	0.434	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0420	0.109	PQL	mg/Kg	
SL-006-SA8N-SB-4.0-5.0	ANTIMONY	J	0.118	0.237	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0818	0.473	PQL	mg/Kg	
	SILVER	J	0.0343	0.118	PQL	mg/Kg	
SL-006-SA8N-SB-8.0-9.0	ANTIMONY	J	0.129	0.236	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0801	0.471	PQL	mg/Kg	
	SILVER	J	0.0438	0.118	PQL	mg/Kg	
SL-111-SA8N-SS-0.0-0.5	ANTIMONY	J	0.116	0.225	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.144	0.451	PQL	mg/Kg	
	SILVER	J	0.0394	0.113	PQL	mg/Kg	
SL-112-SA8N-SS-0.0-0.5	ANTIMONY	J	0.104	0.221	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.226	0.443	PQL	mg/Kg	
	SILVER	J	0.0473	0.111	PQL	mg/Kg	
SL-115-SA8N-SS-0.0-0.5	ANTIMONY	J	0.129	0.222	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0910	0.445	PQL	mg/Kg	
SL-116-SA8N-SS-0.0-0.5	ANTIMONY	J	0.165	0.238	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.150	0.477	PQL	mg/Kg	
	SILVER	J	0.0525	0.119	PQL	mg/Kg	
SL-117-SA8N-SS-0.0-0.5	ANTIMONY	J	0.0883	0.201	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.144	0.401	PQL	mg/Kg	
	SILVER	J	0.0795	0.100	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: DE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-118-SA8N-SS-0.0-0.5	ANTIMONY	J	0.113	0.233	PQL	mg/Kg	
	SELENIUM	J	0.176	0.465	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0411	0.116	PQL	mg/Kg	
SL-119-SA8N-SS-0.0-0.5	ANTIMONY	J	0.143	0.209	PQL	mg/Kg	
	SELENIUM	J	0.171	0.419	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0481	0.105	PQL	mg/Kg	
SL-125-SA8N-SS-0.0-0.5	ANTIMONY	J	0.152	0.238	PQL	mg/Kg	
	SELENIUM	J	0.226	0.476	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0510	0.119	PQL	mg/Kg	
SL-126-SA8N-SS-0.0-0.5	ANTIMONY	J	0.138	0.216	PQL	mg/Kg	
	SELENIUM	J	0.244	0.431	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0760	0.108	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-004-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.33	1.2	PQL	mg/Kg	J (all detects)
SL-005-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.32	1.2	PQL	mg/Kg	J (all detects)
SL-006-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.39	1.2	PQL	mg/Kg	J (all detects)
SL-115-SA8N-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.37	1.1	PQL	mg/Kg	J (all detects)
SL-119-SA8N-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.43	1.1	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP06-SA8N-QC-042111	MERCURY	J	0.0221	0.0997	PQL	mg/Kg	J (all detects)
SL-004-SA8N-SB-9.0-10.0	MERCURY	J	0.0071	0.105	PQL	mg/Kg	J (all detects)
SL-005-SA8N-SB-4.0-5.0	MERCURY	J	0.0109	0.114	PQL	mg/Kg	J (all detects)
SL-005-SA8N-SB-8.0-9.0	MERCURY	J	0.0112	0.108	PQL	mg/Kg	J (all detects)
SL-006-SA8N-SB-4.0-5.0	MERCURY	J	0.0087	0.114	PQL	mg/Kg	J (all detects)
SL-111-SA8N-SS-0.0-0.5	MERCURY	J	0.0178	0.110	PQL	mg/Kg	J (all detects)
SL-112-SA8N-SS-0.0-0.5	MERCURY	J	0.0066	0.109	PQL	mg/Kg	J (all detects)
SL-115-SA8N-SS-0.0-0.5	MERCURY	J	0.0172	0.110	PQL	mg/Kg	J (all detects)
SL-116-SA8N-SS-0.0-0.5	MERCURY	J	0.0755	0.112	PQL	mg/Kg	J (all detects)
SL-117-SA8N-SS-0.0-0.5	MERCURY	J	0.0181	0.103	PQL	mg/Kg	J (all detects)
SL-118-SA8N-SS-0.0-0.5	MERCURY	J	0.0315	0.109	PQL	mg/Kg	J (all detects)
SL-119-SA8N-SS-0.0-0.5	MERCURY	J	0.0190	0.101	PQL	mg/Kg	J (all detects)
SL-125-SA8N-SS-0.0-0.5	MERCURY	J	0.0288	0.114	PQL	mg/Kg	J (all detects)
SL-126-SA8N-SS-0.0-0.5	MERCURY	J	0.0347	0.106	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: DE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-116-SA8N-SS-0.0-0.5	EFH (C15-C20)	J	13	36	PQL	mg/Kg	J (all detects)
SL-125-SA8N-SS-0.0-0.5	EFH (C15-C20)	J	5.6	7.4	PQL	mg/Kg	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP06-SA8N-QC-042111	AROCLOR 1254 AROCLOR 1260	J J	1.3 1.6	3.6 3.6	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-111-SA8N-SS-0.0-0.5	AROCLOR 1260	J	3.3	3.8	PQL	ug/Kg	J (all detects)
SL-117-SA8N-SS-0.0-0.5	Aroclor 5460	J	1.9	3.5	PQL	ug/Kg	J (all detects)
SL-119-SA8N-SS-0.0-0.5	AROCLOR 1254 AROCLOR 1260	J J	0.82 0.96	1.8 1.8	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-125-SA8N-SS-0.0-0.5	AROCLOR 1260	J	2.0	2.1	PQL	ug/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-004-SA8N-SB-4.0-5.0	METHYLENE CHLORIDE	J	0.59	4.0	PQL	ug/Kg	J (all detects)
SL-005-SA8N-SB-4.0-5.0	METHYLENE CHLORIDE	J	0.44	4.1	PQL	ug/Kg	J (all detects)
SL-006-SA8N-SB-4.0-5.0	METHYLENE CHLORIDE	J	0.52	4.5	PQL	ug/Kg	J (all detects)

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP06-SA8N-QC-042111	BIS(2-ETHYLHEXYL)PHTHALATE	J	57	350	PQL	ug/Kg	J (all detects)
SL-004-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	23	390	PQL	ug/Kg	J (all detects)
SL-004-SA8N-SB-9.0-10.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	24	370	PQL	ug/Kg	J (all detects)
SL-005-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	21	380	PQL	ug/Kg	J (all detects)
SL-005-SA8N-SB-8.0-9.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	26	370	PQL	ug/Kg	J (all detects)
SL-006-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	20	400	PQL	ug/Kg	J (all detects)
SL-006-SA8N-SB-8.0-9.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	24	390	PQL	ug/Kg	J (all detects)
SL-111-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	36	370	PQL	ug/Kg	J (all detects)
SL-112-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	28	380	PQL	ug/Kg	J (all detects)
SL-115-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	20	370	PQL	ug/Kg	J (all detects)
SL-116-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	33	400	PQL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: DE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-117-SA8N-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	17	170	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	24	170	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	34	350	PQL	ug/Kg	
	CHRYSENE	J	31	170	PQL	ug/Kg	
SL-118-SA8N-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	26	190	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	23	190	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	46	390	PQL	ug/Kg	
	CHRYSENE	J	39	190	PQL	ug/Kg	
	FLUORANTHENE	J	23	190	PQL	ug/Kg	
	PYRENE	J	27	190	PQL	ug/Kg	
SL-125-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	48	400	PQL	ug/Kg	J (all detects)
SL-126-SA8N-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	50	370	PQL	ug/Kg	J (all detects)
	Butylbenzylphthalate	J	26	180	PQL	ug/Kg	

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP06-SA8N-QC-042111	BENZO(A)ANTHRACENE	J	0.79	1.8	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	0.94	1.8	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	0.97	1.8	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	0.75	1.8	PQL	ug/Kg	
	Butylbenzylphthalate	J	13	19	PQL	ug/Kg	
	CHRYSENE	J	1.4	1.8	PQL	ug/Kg	
	FLUORANTHENE	J	1.6	1.8	PQL	ug/Kg	
	PHENANTHRENE	J	0.87	1.8	PQL	ug/Kg	
	PYRENE	J	1.3	1.8	PQL	ug/Kg	
SL-111-SA8N-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	5.1	9.3	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	4.0	9.3	PQL	ug/Kg	
	CHRYSENE	J	4.3	9.3	PQL	ug/Kg	
	FLUORANTHENE	J	5.1	9.3	PQL	ug/Kg	
	PYRENE	J	3.8	9.3	PQL	ug/Kg	
SL-112-SA8N-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	1.0	1.9	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	0.95	1.9	PQL	ug/Kg	
	FLUORANTHENE	J	0.93	1.9	PQL	ug/Kg	
	FLUORENE	J	0.82	1.9	PQL	ug/Kg	
	NAPHTHALENE	J	1.1	1.9	PQL	ug/Kg	
	PHENANTHRENE	J	0.76	1.9	PQL	ug/Kg	
SL-115-SA8N-SS-0.0-0.5	ANTHRACENE	J	2.1	9.3	PQL	ug/Kg	J (all detects)
SL-116-SA8N-SS-0.0-0.5	ANTHRACENE	J	4.6	10	PQL	ug/Kg	J (all detects)
	BENZO(K)FLUORANTHENE	J	8.1	10	PQL	ug/Kg	
	DIBENZO(A,H)ANTHRACENE	J	4.1	10	PQL	ug/Kg	
	FLUORENE	J	5.1	10	PQL	ug/Kg	
SL-117-SA8N-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	5.4	8.7	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	7.8	8.7	PQL	ug/Kg	
	DIBENZO(A,H)ANTHRACENE	J	3.6	8.7	PQL	ug/Kg	
	FLUORANTHENE	J	6.1	8.7	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	4.0	8.7	PQL	ug/Kg	
	PYRENE	J	6.1	8.7	PQL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE134 **Laboratory: LL**

EDD Filename: DE134_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-118-SA8N-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	6.0	9.7	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	9.0	9.7	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	3.9	9.7	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	5.2	9.7	PQL	ug/Kg	
SL-119-SA8N-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	1.4	1.8	PQL	ug/Kg	J (all detects)
	BENZO(K)FLUORANTHENE	J	0.75	1.8	PQL	ug/Kg	
	Diethylphthalate	J	8.9	19	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.0	1.8	PQL	ug/Kg	
	PHENANTHRENE	J	1.4	1.8	PQL	ug/Kg	
	PYRENE	J	1.7	1.8	PQL	ug/Kg	
SL-125-SA8N-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	1.4	2.0	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	1.9	2.0	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	1.5	2.0	PQL	ug/Kg	
	Di-n-butylphthalate	J	7.5	22	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.4	2.0	PQL	ug/Kg	
	NAPHTHALENE	J	1.8	2.0	PQL	ug/Kg	
SL-126-SA8N-SS-0.0-0.5	ANTHRACENE	J	0.40	1.8	PQL	ug/Kg	J (all detects)
	NAPHTHALENE	J	1.2	1.8	PQL	ug/Kg	

Method: 8315A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-111-SA8N-SS-0.0-0.5	FORMALDEHYDE	J	1500	1700	PQL	ug/Kg	J (all detects)
SL-112-SA8N-SS-0.0-0.5	FORMALDEHYDE	J	780	1700	PQL	ug/Kg	J (all detects)
SL-116-SA8N-SS-0.0-0.5	FORMALDEHYDE	J	1600	1800	PQL	ug/Kg	J (all detects)
SL-117-SA8N-SS-0.0-0.5	FORMALDEHYDE	J	1300	1600	PQL	ug/Kg	J (all detects)
SL-118-SA8N-SS-0.0-0.5	FORMALDEHYDE	J	1100	1800	PQL	ug/Kg	J (all detects)
SL-119-SA8N-SS-0.0-0.5	FORMALDEHYDE	J	1000	1600	PQL	ug/Kg	J (all detects)
SL-125-SA8N-SS-0.0-0.5	FORMALDEHYDE	J	1700	1800	PQL	ug/Kg	J (all detects)
SL-126-SA8N-SS-0.0-0.5	FORMALDEHYDE	J	870	1600	PQL	ug/Kg	J (all detects)

Method: 9012B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-115-SA8N-SS-0.0-0.5	CYANIDE	J	0.21	0.55	PQL	mg/Kg	J (all detects)
SL-116-SA8N-SS-0.0-0.5	CYANIDE	J	0.40	0.60	PQL	mg/Kg	J (all detects)
SL-125-SA8N-SS-0.0-0.5	CYANIDE	J	0.24	0.60	PQL	mg/Kg	J (all detects)
SL-126-SA8N-SS-0.0-0.5	CYANIDE	J	0.21	0.55	PQL	mg/Kg	J (all detects)

Enclosure II

Level IV Validation Reports

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	April 21, 2011
LDC Report Date:	October 12, 2011
Matrix:	Soil/Water
Parameters:	Volatiles
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE134

Sample Identification

SL-004-SA8N-SB-4.0-5.0
SL-005-SA8N-SB-4.0-5.0
SL-006-SA8N-SB-4.0-5.0
TB-042111

Introduction

This data review covers 3 soil samples and one water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
4/27/11 (00:45)	2-Chloroethylvinyl ether	30	All soil samples in SDG DE134	J (all detects) UJ (all non-detects)	A
4/27/11 (08:38)	Dichlorodifluoromethane 2,2-Dichloropropane Carbon tetrachloride 1,2-Dichloroethane Bromodichloromethane	30 26 33 35 26	All water samples in SDG DE134	J (all detects) UJ (all non-detects)	A

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
3/1/11	Bromochloromethane	36	All soil samples in SDG DE134	J (all detects) UJ (all non-detects)	A

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
VBLKB38	4/27/11	Methylene chloride Toluene	0.46 ug/Kg 0.08 ug/Kg	All soil samples in SDG DE134

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
SL-004-SA8N-SB-4.0-5.0	Methylene chloride	0.59 ug/Kg	4.0U ug/Kg
SL-005-SA8N-SB-4.0-5.0	Methylene chloride	0.44 ug/Kg	4.1U ug/Kg
SL-006-SA8N-SB-4.0-5.0	Methylene chloride	0.52 ug/Kg	4.5U ug/Kg

Sample TB-042111 was identified as a trip blank. No volatile contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
LCS/D 1Y32 (All water samples in SDG DE134)	Freon-133a	132 (77-120)	132 (77-120)	-	J (all detects)	P
	Dichlorodifluoromethane	123 (47-120)	122 (47-120)	-	J (all detects)	
	Chloromethane	-	139 (60-129)	-	J (all detects)	
	Vinyl chloride	-	127 (65-125)	-	J (all detects)	
	Bromomethane	121 (44-120)	125 (44-120)	-	J (all detects)	
	1,2-Dichloroethane	131 (70-130)	-	-	J (all detects)	

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE134	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Volatiles - Data Qualification Summary - SDG DE134

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE134	SL-004-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-4.0-5.0	2-Chloroethylvinyl ether	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
DE134	TB-042111	Dichlorodifluoromethane 2,2-Dichloropropane Carbon tetrachloride 1,2-Dichloroethane Bromodichloromethane	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
DE134	SL-004-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-4.0-5.0	Bromochloromethane	J (all detects) UJ (all non-detects)	A	Continuing calibration (ICV %D) (C)
DE134	TB-042111	Freon-133a Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane 1,2-Dichloroethane	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	P	Laboratory control samples (%R) (L)
DE134	SL-004-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-4.0-5.0 TB-042111	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Volatiles - Laboratory Blank Data Qualification Summary - SDG DE134

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P	Code
DE134	SL-004-SA8N-SB-4.0-5.0	Methylene chloride	4.0U ug/Kg	A	B
DE134	SL-005-SA8N-SB-4.0-5.0	Methylene chloride	4.1U ug/Kg	A	B
DE134	SL-006-SA8N-SB-4.0-5.0	Methylene chloride	4.5U ug/Kg	A	B

Santa Susana Field Laboratory
Volatiles - Field Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

LDC #: 26275B1a **VALIDATION COMPLETENESS WORKSHEET** Date: 10/12/11
SDG #: DE134 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/21/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30, r^2
IV.	Continuing calibration/ICV	SW	ICV/CCV ≤ 25
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	SW	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	TB = 4

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil + water

1	SL-004-SA8N-SB-4.0-5.0	11	VBLKB38	21		31	
2	SL-005-SA8N-SB-4.0-5.0	12	VBLKY32	22		32	
3	SL-006-SA8N-SB-4.0-5.0	13		23		33	
4	TB-042111	14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

DC #: 26275B/a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: C

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?		✓		
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within + 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds, TICs				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 26275B/2

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
Y N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?
Y N N/A Were all %D and RRFs within the validation criteria of ≤25 %D and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %D (Limit: <25.0%)	Finding RRF (Limit: >0.05)	Associated Samples	Qualifications
	3/01/11	ICV	PP	36		All soils	J/UJ/A (C)
	4/27/11 00:45	CCV	II	30		↓	↓ (C)
	4/27/11 08:38	CCV	JJ	30		All water	(C)
			OO	26			
			O	33			
			L	35			
			P	26			

LDC #: 26275B/a

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: FT
2nd Reviewer: C

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank associated with every sample in this SDG?
Y N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?
Y N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

(B)

Blank analysis date: 4/27/11
Conc. units: ug/kg
Associated Samples: All SOILS

Compound	Blank ID	Sample Identification								
[redacted]	VBLKB38		1	2	3					
E	0.46		0.59/4.04	0.44/4.11	0.52/4.54					
CC	0.08		-		-					
CRQL										

Blank analysis date:
Conc. units:
Associated Samples:

Compound	Blank ID	Sample Identification								
[redacted]										
CRQL										

All results were qualified using the criteria stated below except those circled.

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, Carbon disulfide and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 26275B1a

VALIDATION FINDINGS WORKSHEET

Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

[✓ Y] N N/A Was a LCS required?
Y [✓ N] N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		LCS/D 1Y32	Freon 133a	132 (77-120)	132 (77-120)	( )	All water	J/Pdet (L)
			JJ	123 (47-120)	122 (47-120)	( )		
			A	( )	139 (60-129)	( )		
			C	( )	127 (65-125)	( )		
			B	121 (44-120)	125 (44-120)	( )		
			L	131 (70-130)	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC #: 36275B1a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer: C

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (50 std)	Recalculated RRF (50 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	3/01/11	C (1st internal standard)	0.4158	0.4158	0.4296	0.4296	9	9
			EE (2nd internal standard)	1.6663	1.6663	1.5916	1.5916	10	10
			JJJ (3rd internal standard)	1.4144	1.4144	1.3506	1.3506	9	9
			(4th internal standard)						
2	ICAL	4/25/11	C (1st internal standard)	0.3025	0.3025	0.3153	0.3153	12	12
			EE (2nd internal standard)	2.0871	2.0871	2.0680	2.0680	6	6
			JJJ (3rd internal standard)	1.8352	1.8352	1.8409	1.8409	5	5
			(4th internal standard)						
3			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275 B/a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV	4/27/11	C (1st internal standard)	0.4296	0.3832	0.3832	11	11
	0045		EE (2nd internal standard)	1.5916	1.5709	1.5709	1	1
			JJJ (3rd internal standard)	1.3506	1.3339	1.3339	1	1
			(4th internal standard)					
2	CCV	4/27/11	C (1st internal standard)	0.3153	0.3720	0.3720	18	18
	08:38		EE (2nd internal standard)	2.0680	2.1605	2.1605	4	4
			JJJ (3rd internal standard)	1.8409	1.8088	1.8088	2	2
			(4th internal standard)					
3			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
4			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B/a

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane	50.0	48.479	97	97	0
1,2-Dichloroethane-d4	↓	48.963	98	98	↓
Toluene-d8		50.265	101	101	
Bromofluorobenzene		44.551	89	89	

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: [redacted]

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [signature]

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = | LCS - LCSD | * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: LCS/B38

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
[redacted]	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene	20	NA	21.79	NA	109	109				
Trichloroethene			19.84		99	99				
Benzene			21.51		108	108				
Toluene			20.6		103	103				
Chlorobenzene			20.01		100	100	NA			

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B1a

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

RRF = Relative response factor of the calibration standard.

V_o = Volume or weight of sample pruged in milliliters (ml) or grams (g).

Df = Dilution factor.

%S = Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. #1, E:

Conc. = $\frac{(3750)(50)(5)}{(1068407)(0.3108)(5.96)(0.84)}$

=

0.6 ug/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 21, 2011

LDC Report Date: October 11, 2011

Matrix: Soil/Water

Parameters: 1,4-Dioxane

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE134

Sample Identification

SL-004-SA8N-SB-4.0-5.0
SL-005-SA8N-SB-4.0-5.0
SL-006-SA8N-SB-4.0-5.0
TB-042111

Introduction

This data review covers 3 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B using Selected Ion Monitoring (SIM) for 1,4-Dioxane.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for 1,4-Dioxane.

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 25.0% for 1,4-Dioxane.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for 1,4-Dioxane.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No 1,4-dioxane was found in the method blanks.

Sample TB-042111 was identified as a trip blank. No 1,4-dioxane was found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE134	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
1,4-Dioxane - Data Qualification Summary - SDG DE134

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE134	SL-004-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-4.0-5.0 TB-042111	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
1,4-Dioxane - Laboratory Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
1,4-Dioxane - Field Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

LDC #: 26275B1b **VALIDATION COMPLETENESS WORKSHEET** Date: 10/11/11
SDG #: DE134 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS 1,4-Dioxane (EPA SW 846 Method 8260B-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/21/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation (RL/LOQ/LODs)	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	TB = 4

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil + water

1	SL-004-SA8N-SB-4.0-5.0	11	1 VBLKE01	21		31	
2	SL-005-SA8N-SB-4.0-5.0	12	2 VBLKE99	22		32	
3	SL-006-SA8N-SB-4.0-5.0	13		23		33	
4	2 TB-042111 W	14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 26275B1b

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FT
2nd Reviewer:

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.			✓	
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

DC #: 26275B1b

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal Standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within + 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within + 0.06 RRT units of the standard?			✓	
Did compound spectra meet specified EPA "Functional Guidelines" criteria?			✓	
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?			✓	
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 26275B16

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (5 std)	Recalculated RRF (5 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	11/7/10	1,4-Dioxane (1st internal standard)	1.3539	1.3539	1.3396	1.3396	2	2
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
2	ICAL	11/01/10	1,4-Dioxane (1st internal standard)	1.3359	1.3359	1.3219	1.3219	1	1
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
3			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B1b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV	4/25/11	1,4-Dioxane (1st internal standard)	1.3396	1.4257	1.4257	6	6
	14:23		(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
2	CCV	4/22/11	√ (1st internal standard)	1.3219	1.4247	1.4247	8	8
	15:39		(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
3			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					
4			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					
			(4th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B1b

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
~~Dibromofluoromethane~~					
~~1,2-Dichloroethane-d4~~					
Toluene-d8	10	9.646	96	96	0
~~Bromofluorobenzene~~					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: 28213B2

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = | LCS - LCSD | * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: LCSD E01

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,4-Dioxane	125	125	131.32	148.6	105	105	119	119	12	12
1,1-Dichloroethene										
Trichloroethene										
Benzene										
Toluene										
Chlorobenzene										

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275-B1b

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
RRF	=	Relative response factor of the calibration standard.
V_o	=	Volume or weight of sample pruged in milliliters (ml) or grams (g).
Df	=	Dilution factor.
%S	=	Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. _____, _____:

Conc. = ( ) ( ) ( ) / ( ) ( ) ( ) ( )

= ND

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	April 21, 2011
LDC Report Date:	October 12, 2011
Matrix:	Soil
Parameters:	Semivolatiles
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE134

Sample Identification

SL-111-SA8N-SS-0.0-0.5
SL-112-SA8N-SS-0.0-0.5
SL-115-SA8N-SS-0.0-0.5
SL-116-SA8N-SS-0.0-0.5
SL-117-SA8N-SS-0.0-0.5
SL-118-SA8N-SS-0.0-0.5
SL-119-SA8N-SS-0.0-0.5
SL-125-SA8N-SS-0.0-0.5
SL-126-SA8N-SS-0.0-0.5
DUP06-SA8N-QC-042111
SL-004-SA8N-SB-4.0-5.0
SL-004-SA8N-SB-9.0-10.0
SL-005-SA8N-SB-4.0-5.0
SL-005-SA8N-SB-8.0-9.0
SL-006-SA8N-SB-4.0-5.0
SL-006-SA8N-SB-8.0-9.0
SL-119-SA8N-SS-0.0-0.5MS
SL-119-SA8N-SS-0.0-0.5MSD

Introduction

This data review covers 18 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C for Semivolatiles.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
5/3/11	4,6-Dinitro-2-methylphenol	36	SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5MS SL-119-SA8N-SS-0.0-0.5MSD SBLKA119	J (all detects) UJ (all non-detects)	A

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatile contaminants were found in the method blanks.

No field blanks were identified in this SDG.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-119-SA8N-SS-0.0-0.5MS/MSD (SL-119-SA8N-SS-0.0-0.5)	N-Nitrosodimethylamine Hexachloroethane Nitrobenzene 4-Chloroaniline	- - 118 (72-106) -	- - 123 (72-106) -	69 (≤30) 31 (≤30) - 40 (≤30)	J (all detects) J (all detects) J (all detects) J (all detects)	A
SL-119-SA8N-SS-0.0-0.5MS/MSD (SL-119-SA8N-SS-0.0-0.5)	Benzidine	0 (35-141)	0 (35-141)	-	J (all detects) R (all non-detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
119LALCS	2,4-Dinitrophenol	35 (37-120)	All samples in SDG DE134	J (all detects) UJ (all non-detects)	P
119LALCS	Pyrene	154 (75-115)	All samples in SDG DE134	J (all detects)	P
119LALCS	Butylbenzylphthalate	136 (75-115)	SL-111-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5 SBLKA119	J (all detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE134	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples SL-119-SA8N-SS-0.0-0.5 and DUP06-SA8N-QC-042111 were identified as field duplicates. No semivolatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)	Flags	A or P
	SL-119-SA8N-SS-0.0-0.5	DUP06-SA8N-QC-042111			
Bis(2-ethylhexyl)phthalate	Not reported	57	-	-	-

Santa Susana Field Laboratory
Semivolatiles - Data Qualification Summary - SDG DE134

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE134	SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5	4,6-Dinitro-2-methylphenol	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
DE134	SL-119-SA8N-SS-0.0-0.5	N-Nitrosodimethylamine Hexachloroethane 4-Chloroaniline	J (all detects) J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (RPD) (Q)
DE134	SL-119-SA8N-SS-0.0-0.5	Nitrobenzene	J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE134	SL-119-SA8N-SS-0.0-0.5	Benzidine	J (all detects) R (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE134	SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5 DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0	2,4-Dinitrophenol	J (all detects) UJ (all non-detects)	P	Laboratory control samples (%R) (L)
DE134	SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5 DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0	Pyrene	J (all detects)	P	Laboratory control samples (%R) (L)
DE134	SL-111-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5	Butylbenzylphthalate	J (all detects)	P	Laboratory control samples (%R) (L)

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE134	SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5 DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Semivolatiles - Field Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

LDC #: 26275B2a **VALIDATION COMPLETENESS WORKSHEET** Date: 10/12/11
SDG #: DE134 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: EJ
2nd Reviewer: E

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/21/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30, r^2
IV.	Continuing calibration/ICV	SW	ICV/CCV ≤ 25
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	SW	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D = 7, 10
XVII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

Soil

1	SL-111-SA8N-SS-0.0-0.5	11	SL-004-SA8N-SB-4.0-5.0	21	SBLKLA119	31	
2	SL-112-SA8N-SS-0.0-0.5	12	SL-004-SA8N-SB-9.0-10.0	22		32	
3	SL-115-SA8N-SS-0.0-0.5	13	SL-005-SA8N-SB-4.0-5.0	23		33	
4	SL-116-SA8N-SS-0.0-0.5	14	SL-005-SA8N-SB-8.0-9.0	24		34	
5	SL-117-SA8N-SS-0.0-0.5	15	SL-006-SA8N-SB-4.0-5.0	25		35	
6	SL-118-SA8N-SS-0.0-0.5	16	SL-006-SA8N-SB-8.0-9.0	26		36	
7	SL-119-SA8N-SS-0.0-0.5	17	SL-119-SA8N-SS-0.0-0.5MS	27		37	
8	SL-125-SA8N-SS-0.0-0.5	18	SL-119-SA8N-SS-0.0-0.5MSD	28		38	
9	SL-126-SA8N-SS-0.0-0.5	19		29		39	
10	DUP06-SA8N-QC-042111	20		30		40	

LDC #: 26275132a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?		✓		
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/ Matrix spike duplicate				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. LCS/LCSD				
Was an LCS analyzed for this SDG?				

LDC #: 26275B2a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?	✓			
Were the performance evaluation (PE) samples within the acceptance limits?	✓			
X. Internal Standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within + 30 seconds from the associated calibration standard?	✓			
XI. Target Compound Identification				
Were relative retention times (RRT's) within + 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound Quantitation				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively Identified Compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System Performance				
System performance was found to be acceptable.	✓			
XV. Overall Assessment				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field Duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XVII. Field Blanks				
Field blanks were identified in this SDG.		✓	✓	
Target compounds were detected in the field blanks.				

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA Method 8270)

A. Phenol	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol	III. Benzo(a)pyrene
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene	T. 4-Chloroaniline	II. 4-Nitrophenol	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene	JJ. Dibenzofuran	YY. Fluoranthene	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine	Y. 2,4,6-Trichlorophenol	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. 1-Methylnaphthalene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)	FFF. Di-n-octylphthalate	UUU.
N. 2-Nitrophenol	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 26275B2a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Reviewer: FT
2nd Reviewer: C

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours of sample analysis for each instrument?
Y N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?
Y N N/A Were all %D and RRFs within the validation criteria of ≤25 %D and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤25.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	5/3/11	CCV	PP	36		SBLKLA119,	J/UJ/A (C)
	05:42					1-4, 7, 17, 18	

LDC #: 26275B2a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: FT
2nd Reviewer: C

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

(Y) N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y (N) N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		17+18	OOO	( )	( )	69 (30)	7	J/A det (Q)
			K	( )	( )	31 (30)	↓	↓
			L	118 (72-106)	123 (72-106)	( )	↓	↓
			T	( )	( )	40 (30)	↓	↓
			~~XX~~	( )	( )	~~35~~ ( )	↓	↓
			SSS	0 (35-141)	0 (35-141)	( )	↓	J/R/A
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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LDC #: 26275B2a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [signature]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was a LCS required?

Y (N) N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		119LALCS	HH	35 (37-120)	( )	( )	All	J/UJ/P (2)
			ZZ	154 (75-115)	( )	( )	↓	J/Pdet (2)
				( )	( )	( )		
				( )	( )	( )		
		↓	AAA	136 (75-115)	( )	( )	SBLKLA119,	J/Pdet (2)
				( )	( )	( )	1, 3→6, 9	↓ ↓
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		

LDC #: 26275B2Q

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: FT
2nd reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were field duplicate pairs identified in this SDG?
Y N N/A Were target compounds identified in the field duplicate pairs?

Compound	Concentration (ug/kg)		RPD
	7	10	
EEE	Not reported	57	—

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

LDC #: 26275B29

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (SD std)	Recalculated RRF (SD std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	4/28/11	Phenol (1st internal standard)	2.807	2.807	2.817	2.817	4	4
			Nitrobenzene Naphthalene (2nd internal standard)	0.436	0.436	0.428	0.428	4	4
			~~Acenaphthene~~ Diphenylether ~~Fluorene~~ (3rd internal standard)	~~0.725~~	~~0.725~~	~~0.723~~	~~0.723~~	~~2~~	~~2~~
			Pentachlorophenol (4th internal standard)	0.135	0.135	0.134	0.134	5	5
			Bis(2-ethylhexyl)phthalate (5th internal standard)	0.808	0.808	0.797	0.797	2	2
			Di-n-octylphthalate Benzo(a)pyrene (6th internal standard)	1.561	1.561	1.509	1.509	6	6
2			2-Nitroaniline Phenol (1st internal standard)	0.413	0.413	0.402	0.402	4	4
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						
3			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B29

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV 0542	5/3/11	Phenol (1st internal standard)	2.817	2.804	2.804	0	0
			~~Naphthalene~~ Nitrobenzene (2nd internal standard)	0.478	0.430	0.430	1	1
			~~Fluorene~~ 2-Nitroaniline (3rd internal standard)	~~0.723~~ 0.402	0.415	0.415	3	3
			Pentachlorophenol (4th internal standard)	0.134	0.150	0.150	11	11
			Bis(2-ethylhexyl)phthalate (5th internal standard)	0.797	0.828	0.828	4	4
			~~Benzo(a)pyrene~~ Di-n-octylphthalate (6th internal standard)	1.509	1.514	1.514	0	0
2	CCV 0802	5/4/11	Phenol (1st internal standard)	2.817	2.852	2.852	1	1
			~~Naphthalene~~ Nitrobenzene (2nd internal standard)	0.478	0.453	0.453	6	6
			~~Fluorene~~ 2-Nitroaniline (3rd internal standard)	0.723 0.402	~~0.402~~ 0.398	0.398	1	1
			Pentachlorophenol (4th internal standard)	0.134	0.137	0.137	2	2
			Bis(2-ethylhexyl)phthalate (5th internal standard)	0.797	0.845	0.845	6	6
			~~Benzo(a)pyrene~~ Di-n-octylphthalate (6th internal standard)	1.509	1.597	1.597	6	6
3	CCV 0325	5/5/11	Phenol (1st internal standard)	2.817	2.817	2.817	0	0
			~~Naphthalene~~ Nitrobenzene (2nd internal standard)	0.478	0.453	0.453	6	6
			~~Fluorene~~ 2-Nitroaniline (3rd internal standard)	0.402	0.408	0.408	1	1
			Pentachlorophenol (4th internal standard)	0.134	0.124	0.124	8	8
			Bis(2-ethylhexyl)phthalate (5th internal standard)	0.797	0.870	0.870	9	9
			~~Benzo(a)pyrene~~ Di-n-octylphthalate (6th internal standard)	1.509	1.613	1.613	7	7

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B2a

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: C

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	100	75.838	76	76	0
2-Fluorobiphenyl	↓	95.475	95	95	
Terphenyl-d14		72.447	72	72	
Phenol-d5	200	150.558	75	75	
2-Fluorophenol	↓	154.331	77	77	
2,4,6-Tribromophenol	↓	140.827	70	70	↓
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID: _____

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID: _____

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 26275B29

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA

Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentation

RPD = I MSC - MSC I * 2/(MSC + MSDC)

MSC = Matrix spike concentration; MSDC = Matrix spike duplicate concentration

MS/MSD samples: 17 + 18

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol	1644.74	1644.74	ND	1371.54	1364.24	83	83	83	83	1	1
N-Nitroso-di-n-propylamine				1274.8	1342.14	78	78	82	82	5	5
4-Chloro-3-methylphenol				1295.73	1427.09	79	79	87	87	10	10
Acenaphthene				1368.71	1471.12	83	83	89	89	7	7
Pentachlorophenol				1140.01	903.22	69	69	55	55	23	23
Pyrene				1474.32	1557.15	90	90	95	95	5	5

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B2S

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 119LALCS

Compound	Spike Added (ug/Kg)		Spike Concentration (ug/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol	1666.67	NA	1508.57	NA	91	91				
N-Nitroso-di-n-propylamine			1459.78		88	88				
4-Chloro-3-methylphenol			1629.39		98	98				
Acenaphthene			1613.65		97	97				
Pentachlorophenol			1388.32		83	83				
Pyrene			2573.8		154	154	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275829

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

V_o = Volume or weight of sample extract in milliliters (ml) or grams (g).

V_i = Volume of extract injected in microliters (ul)

V_t = Volume of the concentrated extract in microliters (ul)

Df = Dilution Factor.

%S = Percent solids, applicable to soil and solid matrices only.

2.0 = Factor of 2 to account for GPC cleanup

Example:

Sample I.D. #1, ~~Isophorone~~ EEE

Conc. = (8597)(40)(1000)( )( )
( )(0.865)( )( )( )( )
443302 0.797 (30) (0.89)
=

36 ug/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 21, 2011

LDC Report Date: October 12, 2011

Matrix: Soil

Parameters: Semivolatiles

Validation Level: Level IV

Laboratory: Lancaster laboratories

Sample Delivery Group (SDG): DE134

Sample Identification

SL-111-SA8N-SS-0.0-0.5
SL-112-SA8N-SS-0.0-0.5
SL-115-SA8N-SS-0.0-0.5
SL-116-SA8N-SS-0.0-0.5
SL-117-SA8N-SS-0.0-0.5
SL-118-SA8N-SS-0.0-0.5
SL-119-SA8N-SS-0.0-0.5
SL-125-SA8N-SS-0.0-0.5
SL-126-SA8N-SS-0.0-0.5
DUP06-SA8N-QC-042111
SL-004-SA8N-SB-4.0-5.0
SL-004-SA8N-SB-9.0-10.0
SL-005-SA8N-SB-4.0-5.0
SL-005-SA8N-SB-8.0-9.0
SL-006-SA8N-SB-4.0-5.0
SL-006-SA8N-SB-8.0-9.0
SL-119-SA8N-SS-0.0-0.5MS
SL-119-SA8N-SS-0.0-0.5MSD

Introduction

This data review covers 18 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C using Selected Ion Monitoring (SIM) for Semivolatiles.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs) and 25.0% for all other compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
4/15/11	Benzo(b)fluoranthene	30	All samples in SDG DE134	J (all detects) UJ (all non-detects)	A
4/15/11	Di-n-octylphthalate	26	SL-112-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5 DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0 SBLKLC120	J (all detects) UJ (all non-detects)	A

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatiles were found in the method blanks.

No field blanks were identified in this SDG.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. Surrogate recoveries (%R) were not within QC limits for several samples. Since the samples were diluted out, no data were qualified.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-119-SA8N-SS-0.0-0.5MS/MSD (SL-119-SA8N-SS-0.0-0.5)	Diethylphthalate	67 (70-136)	66 (70-136)	-	J (all detects) UJ (all non-detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE134	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

All tentatively identified compounds were within validation criteria.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples SL-119-SA8N-SS-0.0-0.5 and DUP06-SA8N-QC-042111 were identified as field duplicates. No semivolatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)	Flags	A or P
	SL-119-SA8N-SS-0.0-0.5	DUP06-SA8N-QC-042111			
Butylbenzylphthalate	19U	13	200 (≤50)	J (all detects) UJ (all non-detects)	A
Bis(2-ethylhexyl)phthalate	56	Not Reported	-	-	-
Diethylphthalate	8.9	19U	200 (≤50)	J (all detects) UJ (all non-detects)	A
Phenanthrene	1.4	0.87	47 (≤50)	-	-
Fluoranthene	2.3	1.6	36 (≤50)	-	-
Pyrene	1.7	1.3	27 (≤50)	-	-
Benzo(a)anthracene	1.4	0.79	56 (≤50)	J (all detects)	A
Chrysene	2.2	1.4	44 (≤50)	-	-
Benzo(b)fluoranthene	2.6	2.0	26 (≤50)	-	-

Santa Susana Field Laboratory
Semivolatiles - Data Qualification Summary - SDG DE134

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE134	SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5 DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0	Benzo(b)fluoranthene	J (all detects) UJ (all non-detects)	A	Continuing calibration (ICV %D) (C)
DE134	SL-112-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5 DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0	Di-n-octylphthalate	J (all detects) UJ (all non-detects)	A	Continuing calibration (ICV %D) (C)
DE134	SL-119-SA8N-SS-0.0-0.5	Diethylphthalate	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE134	SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5 DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0	All TCL compounds	J (all detects)	A	Compound quantitation and RLs (Z)
DE134	SL-119-SA8N-SS-0.0-0.5 DUP06-SA8N-QC-042111	Butylbenzylphthalate Diethylphthalate Indeno(1,2,3-cd)pyrene	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)
DE134	SL-119-SA8N-SS-0.0-0.5 DUP06-SA8N-QC-042111	Benzo(a)anthracene Benzo(a)pyrene Benzo(g,h,i)perylene	J (all detects) J (all detects) J (all detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Semivolatiles - Field Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

LDC #: 26275B2b **VALIDATION COMPLETENESS WORKSHEET** Date: 10/12/11

SDG #: DE134 Level IV Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: FD

2nd Reviewer: A

METHOD: GC/MS ~~Polynuclear Aromatic Hydrocarbons~~ SW846 (EPA SW 846 Method 8270C-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/21/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	%D RSD ≤ 30, r^2
IV.	Continuing calibration/ICV	SW	ICV/CCV ≤ 20
V.	Blanks	~~A~~ A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation (RL)/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D - 7, 10
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: SOIL

1	SL-111-SA8N-SS-0.0-0.5	11	SL-004-SA8N-SB-4.0-5.0	21	SBLKLC120	31	
2	SL-112-SA8N-SS-0.0-0.5	12	SL-004-SA8N-SB-9.0-10.0	22		32	
3	SL-115-SA8N-SS-0.0-0.5	13	SL-005-SA8N-SB-4.0-5.0	23		33	
4	SL-116-SA8N-SS-0.0-0.5	14	SL-005-SA8N-SB-8.0-9.0	24		34	
5	SL-117-SA8N-SS-0.0-0.5	15	SL-006-SA8N-SB-4.0-5.0	25		35	
6	SL-118-SA8N-SS-0.0-0.5	16	SL-006-SA8N-SB-8.0-9.0	26		36	
7	SL-119-SA8N-SS-0.0-0.5	17	SL-119-SA8N-SS-0.0-0.5MS	27		37	
8	SL-125-SA8N-SS-0.0-0.5	18	SL-119-SA8N-SS-0.0-0.5MSD	28		38	
9	SL-126-SA8N-SS-0.0-0.5	19		29		39	
10	DUP06-SA8N-QC-042111	20		30		40	

LDC #: 26275B26

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?		✓		
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogates				
Were all surrogate %R within QC limits?		✓		
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?	✓			
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 26275 B2b

VALIDATION FINDINGS CHECKLIST

Page: 7 of 2
Reviewer: FT
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal Standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds from the associated calibration standard?	✓			
XI. Target Compound Identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound Quantitation				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively Identified Compounds				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System Performance				
System performance was found to be acceptable.	✓			
XV. Overall Assessment				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field Duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XVII. Field Blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA Method 8270)

A. Phenol	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol	III. Benzo(a)pyrene
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene	T. 4-Chloroaniline	II. 4-Nitrophenol	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene	JJ. Dibenzofuran	YY. Fluoranthene	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine	Y. 2,4,6-Trichlorophenol	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. 1-Methylnaphthalene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)	FFF. Di-n-octylphthalate	UUU.
N. 2-Nitrophenol	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 26275B2b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours of sample analysis for each instrument?

Y N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?

Y N N/A Were all %D and RRFs within the validation criteria of ≤25 %D and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤25.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	4/15/11	ICV	GGG	30		All	J/UJ/A (C)
	↓	↓	FFF	26		SBLKLC120, 2, 7→16	J/UJ/A (C)

CONCAL.2S

LDC #: 26275B2b

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Reviewer: FT
2nd Reviewer: C

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were percent recoveries (%R) for surrogates within QC limits?
Y N N/A If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?
Y N N/A If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Date	Sample ID	Surrogate	%R (Limits)	Qualifications
		1, 3→6	several surrogates were outside limit	( )	no qual 5x DL
				( )	1
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

* QC limits are advisory	QC Limits (Soil)	QC Limits (Water)		QC Limits (Soil)	QC Limits (Water)
S1 (NBZ) = Nitrobenzene-d5	23-120	35-114	S5 (2FP)= 2-Fluorophenol	25-121	21-100
S2 (FBP) = 2-Fluorobiphenyl	30-115	43-116	S6 (TBP) = 2,4,6-Tribromophenol	19-122	10-123
S3 (TPH) = Terphenyl-d14	18-137	33-141	S7 (2CP) = 2-Chlorophenol-d4	20-130*	33-110*
S4 (PHL) = Phenol-d5	24-113	10-94	S8 (DCB) = 1,2-Dichlorobenzene-d4	20-130*	16-110*

LDC #: 26275B2b

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: FT
2nd Reviewer: C

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		17+18	LL	67 (70-136)	66 (70-136)	( )	7	J/UJ/A (a)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

26275B26

LDC#: 11825C2

SDG#: 170532 See comments

VALIDATION FINDINGS WORKSHEET

Field Duplicates

Reviewer: MM

2nd Reviewer: C

METHOD: GC/MS BNA (EPA SW 846 Method 8270-SIM)

(Y) N NA Were field duplicate pairs identified in this SDG?

Y N NA Were target analytes detected in the field duplicate pairs?

(Fd)

Compound	Concentration (ug/Kg)		≤50	
	7	10	RPD	
Butylbenzylphthalate	19U	13	200	J/UJ/A
Bis-(2-Ethylhexyl)phthalate	56	Not Reported	-	
Diethylphthalate	8.9	19U	200	J/UJ/A
Phenanthrene	1.4	0.87	47	
Fluoranthene	2.3	1.6	36	
Pyrene	1.7	1.3	27	
Benzo(a)anthracene	1.4	0.79	56	J/Adet
Chrysene	2.2	1.4	44	
Benzo(b)fluoranthene	2.6	2.0	26	
Benzo(k)fluoranthene	0.75	0.75	0	
Benzo(a)pyrene	1.8	0.94	63	J/Adet
Indeno(1,2,3-cd)pyrene	1.0	1.8U	200	J/UJ/A
Benzo(g,h,i)perylene	1.8	0.97	60	J/Adet

LDC #: 26275B2D

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (/ std)	Recalculated RRF (std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	4/15/11	~~Phenol (1st internal standard)~~						
			Naphthalene (2nd internal standard)	1.061	1.061	1.029	1.029	4	4
			Fluorene (3rd internal standard)	1.310	1.310	1.260	1.260	7	7
			~~Pentachlorophenol~~ Anthracene (4th internal standard)	1.119	1.119	1.080	1.080	9	9
			~~Bis(2-ethylhexyl)phthalate~~ chrysene (5th internal standard)	1.188	1.188	1.146	1.146	4	4
			Benzo(a)pyrene (6th internal standard)	1.092	1.092	1.034	1.034	12	12
2			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						
3			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B0b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	ccv 6:58	5/3/11	~~Phenol (1st internal standard)~~					
			Naphthalene (2nd internal standard)	1.029	1.041	1.041	1.0	1.0
			Fluorene (3rd internal standard)	1.260	1.256	1.256	0	0
			~~Pentachlorophenol~~ Anthracene (4th internal standard)	1.080	1.095	1.095	1	1
			~~Bis(2-ethylhexyl)phthalate~~ Chrysene (5th internal standard)	1.146	1.205	1.205	5	5
			Benzo(a)pyrene (6th internal standard)	1.034	1.092	1.092	6	6
2	ccv 18:05	5/3/11	~~Phenol (1st internal standard)~~					
			Naphthalene (2nd internal standard)	1.029	1.002	1.002	3	3
			Fluorene (3rd internal standard)	1.260	1.260	1.260	0	0
			~~Pentachlorophenol~~ Anthracene (4th internal standard)	1.080	1.107	1.107	3	3
			~~Bis(2-ethylhexyl)phthalate~~ Chrysene (5th internal standard)	1.146	1.161	1.161	1	1
			Benzo(a)pyrene (6th internal standard)	1.034	1.098	1.098	6	6
3	ccv 6:08	5/4/11	~~Phenol (1st internal standard)~~					
			Naphthalene (2nd internal standard)		1.037	1.037	1.0	1
			Fluorene (3rd internal standard)		1.299	1.299	3	3
			~~Pentachlorophenol~~ Anthracene (4th internal standard)		1.105	1.105	2	2
			~~Bis(2-ethylhexyl)phthalate~~ Chrysene (5th internal standard)		1.171	1.171	2	2
			Benzo(a)pyrene (6th internal standard)		1.094	1.094	6	6

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275 B2 b

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: C

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	0.200	0.278	139	139	0
2-Fluorobiphenyl	↓	0.291	145	145	↓
Terphenyl-d14		0.273	136	136	
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 26273 B0 b

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer: C

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentation

RPD = | MSC - MSC | * 2/(MSC + MSDC) MSC = Matrix spike concentration; MSDC = Matrix spike duplicate concentration

MS/MSD samples: 17 + 18

Compound	Spike Added (ug/Kg)		Sample Concentration (ug/Kg)	Spiked Sample Concentration (ug/Kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	-----	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol											
N-Nitroso-di-n-propylamine											
4-Chloro-3-methylphenol											
Acenaphthene	33.11	33.11	ND	28.11	28.53	85	85	86	86	1	1
Pentachlorophenol											
Pyrene	33.11	33.11	1.59	26.46	26.4	75	75	75	75	0	0

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B2D

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: LCS

Compound	Spike Added (ug/kg)		Spike Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene	33.33	NA	30.95	NA	93	93				
Pentachlorophenol										
Pyrene	↓	↓	30.16	↓	90	90	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B26

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_t	=	Volume of extract injected in microliters (ul)
V_i	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. #1, chrysene

Conc. = $\frac{(13878)(1.0)(1000)(5)(\quad)}{(525023)(1.146)(30)(0.89)(\quad)}$

= 4.32 ug/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	April 21, 2011
LDC Report Date:	October 11, 2011
Matrix:	Soil
Parameters:	N-Nitrosodimethylamine
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE134

Sample Identification

SL-111-SA8N-SS-0.0-0.5
SL-112-SA8N-SS-0.0-0.5
SL-115-SA8N-SS-0.0-0.5
SL-116-SA8N-SS-0.0-0.5
SL-117-SA8N-SS-0.0-0.5
SL-118-SA8N-SS-0.0-0.5
SL-119-SA8N-SS-0.0-0.5
SL-125-SA8N-SS-0.0-0.5
SL-126-SA8N-SS-0.0-0.5
SL-119-SA8N-SS-0.0-0.5MS
SL-119-SA8N-SS-0.0-0.5MSD

Introduction

This data review covers 11 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 1625C for N-Nitrosodimethylamine.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance check is not required for by this method.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% .

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0%.

The percent differences (%D) of the second source calibration standard were less than or equal to 30.0%.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No N-nitrosodimethylamine was found in the method blanks.

No field blanks were identified in this SDG.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-119-SA8N-SS-0.0-0.5MS/MSD (SL-119-SA8N-SS-0.0-0.5)	N-Nitrosodimethylamine	-	68 (70-130)	35 (≤30)	J (all detects) UJ (all non-detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE134	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was within validation criteria.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
N-Nitrosodimethylamine - Data Qualification Summary - SDG DE134

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE134	SL-119-SA8N-SS-0.0-0.5	N-Nitrosodimethylamine	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE134	SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
N-Nitrosodimethylamine - Laboratory Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
N-Nitrosodimethylamine - Field Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

LDC #: 26275B2c **VALIDATION COMPLETENESS WORKSHEET** Date: 10/11/11
SDG #: DE134 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer:
2nd Reviewer: A

METHOD: GC/MS N-Nitrosodimethylamine (EPA Method 1625C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/21/11
II.	GC/MS Instrument performance check	N	not Required
III.	Initial calibration	A	%D ≤ 30
IV.	Continuing calibration/ICV	A	ICV ≤ 30 CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation (RL/LOQ/LODs)	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: SOIL

1	SL-111-SA8N-SS-0.0-0.5	11	SBLKLB120	21		31	
2	SL-112-SA8N-SS-0.0-0.5	12	#7MS	22		32	
3	SL-115-SA8N-SS-0.0-0.5	13	#7MSD	23		33	
4	SL-116-SA8N-SS-0.0-0.5	14		24		34	
5	SL-117-SA8N-SS-0.0-0.5	15		25		35	
6	SL-118-SA8N-SS-0.0-0.5	16		26		36	
7	SL-119-SA8N-SS-0.0-0.5	17		27		37	
8	SL-125-SA8N-SS-0.0-0.5	18		28		38	
9	SL-126-SA8N-SS-0.0-0.5	19		29		39	
10		20		30		40	

LDC #: 26275B2C

VALIDATION FINDINGS CHECKLIST

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?		✓		
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Were all percent differences (%D) ~~≤ 25%~~ 20 and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicate				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 26275 B2C

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal Standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds from the associated calibration standard?	✓			
XI. Target Compound Identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound Quantitation				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively Identified Compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System Performance				
System performance was found to be acceptable.	✓			
XV. Overall Assessment				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field Duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field Blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

VALIDATION FINDINGS WORKSHEET

NDMA 1625C

METHOD: ~~GC/MS BNA (EPA Method 8270)~~

A. Phenol	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol	III. Benzo(a)pyrene
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene	T. 4-Chloroaniline	II. 4-Nitrophenol	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene	JJ. Dibenzofuran	YY. Fluoranthene	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine	Y. 2,4,6-Trichlorophenol	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. 1-Methylnaphthalene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)	FFF. Di-n-octylphthalate	UUU.
N. 2-Nitrophenol	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 26275B2c

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: FT
2nd Reviewer: C

METHOD: ~~GC/MS BNA (EPA SW 846 Method 8270)~~ 1625C

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A — Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A — Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A — Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		12 + 13	~~OO~~	( )	68 (70-130)	35 (30)	7	J/UJ/A (a)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		

LDC #: 26275B2c

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer:

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (25 std)	Recalculated RRF (25 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	5/11/11	~~Phenol~~ (1st internal standard) NDMA	1.280	1.280	1.395	1.395	18	18
			~~Naphthalene (2nd internal standard)~~						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						
2	ICAL	5/16/11	~~Phenol~~ (1st internal standard) NDMA	1.120	1.120	1.240	1.240	18	18
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						
3			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B2C

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: ~~GC/MS BNA (EPA SW 846 Method 8270C)~~ 1625C

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV	5/11/11	~~Phenol~~ (1st internal standard) NDMA	1.39537	1.23804	1.23804	11.274999	11.27
	22:37		~~Naphthalene (2nd internal standard)~~					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			~~Benzo(a)pyrene (6th internal standard)~~					
2	CCV	5/16/11	~~Phenol (1st internal standard)~~ NDMA	1.24046	1.12392	1.12392	9.39575	9.39
	10:52		Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			~~Benzo(a)pyrene (6th internal standard)~~					
3	CCV	5/16/11	~~Phenol (1st internal standard)~~ NDMA	1.24046	1.08012	1.08012	12.926	12.93
	13:48		Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			~~Benzo(a)pyrene (6th internal standard)~~					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B2c

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer:

METHOD: ~~GC/MS Semivolatiles (EPA SW 846 Method 8270)~~ 1625C

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
N-Nitrosodimethylamine / Nitrobenzene-d5	25	31.503	126	126	0
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 26275B2C

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer: A

METHOD: ~~GC/MS BNA (EPA SW 846 Method 8270)~~ 1625C

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentation

RPD = I MSC - MSC I * 2/(MSC + MSDC) MSC = Matrix spike concentration MSDC = Matrix spike duplicate concentration

MS/MSD samples: 12 & 13

Compound	Spike Added (ng/kg)		Sample Concentration (ng/kg)	Spiked Sample Concentration (ng/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
~~Phenol~~ NDMA	825.08	825.08	94.32	929.03	654.5	101	101	68	68	35	35
~~N-Nitroso-di-n-propylamine~~											
4-Chloro-3-methylphenol											
Acenaphthene											
Pentachlorophenol											
~~Pyrene~~											

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B2C

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: ~~GC/MS BNA (EPA SW 846 Method 8270)~~ 1625C

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 126LBLC

Compound	Spike Added (ng/Kg)		Spike Concentration (ng/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
~~Phenol~~ NDMA	833.33	NA	740.97	NA	89	89	NA			
~~N-Nitroso-di-n-propylamine~~										
4-Chloro-3-methylphenol										
Acenaphthene										
Pentachlorophenol										
~~Pyrene~~										

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B2C

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer: A

METHOD: ~~GC/MS BNA (EPA SW-846 Method 8270)~~ 1625C

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. #1 , NDMA

Conc. = $\frac{(56734)(25)(1000)(\quad)(\quad)}{(605959)(1.240)(30)(0.89)(\quad)}$

=

70 ug/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 21, 2011

LDC Report Date: October 12, 2011

Matrix: Soil

Parameters: Polychlorinated Biphenyls

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE134

Sample Identification

SL-111-SA8N-SS-0.0-0.5
SL-112-SA8N-SS-0.0-0.5
SL-115-SA8N-SS-0.0-0.5
SL-116-SA8N-SS-0.0-0.5
SL-117-SA8N-SS-0.0-0.5
SL-118-SA8N-SS-0.0-0.5
SL-119-SA8N-SS-0.0-0.5
SL-125-SA8N-SS-0.0-0.5
SL-126-SA8N-SS-0.0-0.5
DUP06-SA8N-QC-042111
SL-004-SA8N-SB-4.0-5.0
SL-004-SA8N-SB-9.0-10.0
SL-005-SA8N-SB-4.0-5.0
SL-005-SA8N-SB-8.0-9.0
SL-006-SA8N-SB-4.0-5.0
SL-006-SA8N-SB-8.0-9.0
SL-119-SA8N-SS-0.0-0.5MS
SL-119-SA8N-SS-0.0-0.5MSD

Introduction

This data review covers 18 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8082 for Polychlorinated Biphenyls.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

III. Initial Calibration

Initial calibration of multicomponent compounds was performed for the primary (quantitation) column as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

Retention time windows were evaluated and considered technically acceptable.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits.

The percent difference (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No polychlorinated biphenyl contaminants were found in the method blanks.

No field blanks were identified in this SDG.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

XI. GPC Calibration

GPC cleanup was not required and therefore not performed in this SDG.

XII. Target Compound Identification

All target compound identifications were within validation criteria.

XIII. Compound Quantitation and Reported RLs

All compound quantitation and RLs were within validation criteria.

The sample results for detected compounds from the two columns were within 40% relative percent difference (RPD) with the following exceptions:

Sample	Compound	RPD	Flag	A or P
SL-118-SA8N-SS-0.0-0.5	Aroclor-1260 Aroclor-1254	45.46 41.44	J (all detects) J (all detects)	A
SL-126-SA8N-SS-0.0-0.5	Aroclor-1260	51.62	J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE134	All compounds reported below the RL.	J (all detects)	A

XIV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XV. Field Duplicates

Samples SL-119-SA8N-SS-0.0-0.5 and DUP06-SA8N-QC-042111 were identified as field duplicates. No polychlorinated biphenyls were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)	Flags	A or P
	SL-119-SA8N-SS-0.0-0.5	DUP06-SA8N-QC-042111			
Aroclor-5460	4.0	2.1U	200 (≤50)	J (all detects) UJ (all non-detects)	A
Aroclor-1254	0.82	1.3	45 (≤50)	-	-
Aroclor-1260	0.96	1.6	50 (≤50)	-	-

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Data Qualification Summary - SDG DE134

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE134	SL-118-SA8N-SS-0.0-0.5	Aroclor-1260 Aroclor-1254	J (all detects) J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE134	SL-126-SA8N-SS-0.0-0.5	Aroclor-1260	J (all detects)	A	Compound quantitation and RLs (RPD) (*XIII)
DE134	SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5 DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)
DE134	SL-119-SA8N-SS-0.0-0.5 DUP06-SA8N-QC-042111	Aroclor-5460	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Field Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

LDC #: 26275B3b **VALIDATION COMPLETENESS WORKSHEET** Date: 10/12/11
SDG #: DE134 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Polychlorinated Biphenyls (EPA SW 846 Method 8082)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/21/11
II.	GC/ECD Instrument Performance Check	NA	
III.	Initial calibration	A	% RSD ≤ 20
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional quality assurance and quality control	N	
X.	Florisil cartridge check	N	
XI.	GPC Calibration	N	
XII.	Target compound identification	A	
XIII.	Compound quantitation RL/LOQ/LODs	SW	
XIV.	Overall assessment of data	A	
XV.	Field duplicates	SW	D = 7, 10
XVI.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

SOIL

1	SL-111-SA8N-SS-0.0-0.5	11	SL-004-SA8N-SB-4.0-5.0	21	PBLK03118	31	
2	SL-112-SA8N-SS-0.0-0.5	12	SL-004-SA8N-SB-9.0-10.0	22		32	
3	SL-115-SA8N-SS-0.0-0.5	13	SL-005-SA8N-SB-4.0-5.0	23		33	
4	SL-116-SA8N-SS-0.0-0.5	14	SL-005-SA8N-SB-8.0-9.0	24		34	
5	SL-117-SA8N-SS-0.0-0.5	15	SL-006-SA8N-SB-4.0-5.0	25		35	
6	SL-118-SA8N-SS-0.0-0.5	16	SL-006-SA8N-SB-8.0-9.0	26		36	
7	SL-119-SA8N-SS-0.0-0.5 ✓	17	SL-119-SA8N-SS-0.0-0.5MS	27		37	
8	SL-125-SA8N-SS-0.0-0.5	18	SL-119-SA8N-SS-0.0-0.5MSD	28		38	
9	SL-126-SA8N-SS-0.0-0.5	19		29		39	
10	DUP06-SA8N-QC-042111 ✓	20		30		40	

Notes: _____

DC #: 260275B3b
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: C

Method: ____ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?				
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

.DC #: 26275B36
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26275B3b
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: EJ
2nd Reviewer:

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	% RPD But 2 <5 Finding ≤ 40	Associated Samples	Qualifications
	BB	45.46	6	J/A det * X111
	AA	41.44		↓
	BB	51.62	9	↓ * X111

Comments: See sample calculation verification worksheet for recalculations

LDC#: 26275B3b **VALIDATION FINDINGS WORKSHEET**
Field Duplicates

Page: 1 of 1
Reviewer: EJ
2nd Reviewer: A

METHOD: PCB Method 8082

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

FD

Compound	Concentration (ug/kg)		≤50 RPD	
	7	10		
Aroclor -5460	4.0	2.1U	200	J/UJ/A
PCB-1254	0.82	1.3	45	
PCB-1260	0.96	1.6	50	

V:\FIELD DUPLICATES\templates\BTEXalkydup.wpd

LDC #: 26275B3b
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: F?
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (200 std)	Recalculated CF (200 std)	Reported Average CF (Initial)	Recalculated Average CF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL 1C20122	5/2/11	1260-1 Aroclor	37	37	39	39	10.2	10.2
			↓ R2	189	189	200	200	13.3	13.3
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B3b
SDG #: pw conn

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: C

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 1:10	5/3/11	Aroclor 1260 R1	200.20	190.39	190.39	4.9	4.9
			R2	200.20	191.13	191.13	4.5	4.5
2	CCV 7:37	5/3/11	↓	200.0	183.74	183.74	8.1	8.1
			↓	200.0	198.51	198.51	0.7	0.7
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #:

SDG #: see cover

METHOD: ✓ GC ___ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer:

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
TCMX	ZB-1	1.037	0.840778	81	80.9	0
DCB	ZB-2		0.972694	93	93.6	0

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #:_____ VALIDATION FINDINGS WORKSHEET Page:__of__

SDG #: per cover

Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FZ

2nd Reviewer:

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD =(((SSCMS - SSCMSD) * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike; MSD = Matrix spike duplicate

MS/MSD samples: 17 + 18

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
PCB-1260	16.67	16.67	0.9	17.93	17.48	102	102	99	99	3	3

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B3D
SDG #: fill cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS031118

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
PCB 1260	16.67	NA	13.24	NA	79	79	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B35
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10% of the reported results?

Concentration= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #1 Compound Name Aroclor 1254

Concentration = 4.031603 / 0.887

= 4.5 ug/kg

#	Sample ID	Compound	Reported Concentrations	Recalculated Results Concentrations	Qualifications
	PCB 1254-1 =	1555.943726 (Σ)(2) / (26)(60.1)	= 3.983	1254-1 =	3.983
				2 =	3.767
				4 =	4.352
				Am	4.031603

Comments: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 21, 2011

LDC Report Date: October 7, 2011

Matrix: Soil

Parameters: Metals

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE134

Sample Identification

SL-111-SA8N-SS-0.0-0.5
SL-112-SA8N-SS-0.0-0.5
SL-115-SA8N-SS-0.0-0.5
SL-116-SA8N-SS-0.0-0.5
SL-117-SA8N-SS-0.0-0.5
SL-118-SA8N-SS-0.0-0.5
SL-119-SA8N-SS-0.0-0.5
SL-125-SA8N-SS-0.0-0.5
SL-126-SA8N-SS-0.0-0.5
DUP06-SA8N-QC-042111
SL-004-SA8N-SB-4.0-5.0
SL-004-SA8N-SB-9.0-10.0
SL-005-SA8N-SB-4.0-5.0
SL-005-SA8N-SB-8.0-9.0
SL-006-SA8N-SB-4.0-5.0
SL-006-SA8N-SB-8.0-9.0
SL-119-SA8N-SS-0.0-0.5MS
SL-119-SA8N-SS-0.0-0.5MSD
SL-119-SA8N-SS-0.0-0.5DUP

Introduction

This data review covers 19 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6010B, 6020, and 7471A for Metals. The metals analyzed were Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Mercury, Nickel, Phosphorus, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, and Zirconium.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

The mass calibration was within 0.1 AMU and the percent relative standard deviation (%RSD) was less than or equal to 5% .

III. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No metal contaminants were found in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
PB (prep blank)	Antimony Calcium Copper Phosphorus Tin Vanadium	0.081 mg/Kg 7.666 mg/Kg 0.394 mg/Kg 1.172 mg/Kg 1.333 mg/Kg 0.087 mg/Kg	All samples in SDG DE134
ICB/CCB	Titanium	0.57 ug/L	SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5 DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0
ICB/CCB	Titanium	0.51 ug/L	SL-111-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
ICB/CCB	Calcium	88.9 ug/L	SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0
ICB/CCB	Iron	97.8 ug/L	SL-004-SA8N-SB-4.0-5.0

Data qualification by the initial, continuing and preparation blanks (ICB/CCB/PBs) was based on the maximum contaminant concentration in the ICB/CCB/PBs in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
SL-111-SA8N-SS-0.0-0.5	Antimony Tin	0.12 mg/Kg 3.0 mg/Kg	0.12U mg/Kg 3.0U mg/Kg
SL-112-SA8N-SS-0.0-0.5	Antimony Tin	0.10 mg/Kg 2.7 mg/Kg	0.10U mg/Kg 2.7U mg/Kg
SL-115-SA8N-SS-0.0-0.5	Antimony Tin	0.13 mg/Kg 2.7 mg/Kg	0.13U mg/Kg 2.7U mg/Kg
SL-116-SA8N-SS-0.0-0.5	Antimony Tin	0.17 mg/Kg 2.4 mg/Kg	0.17U mg/Kg 2.4U mg/Kg
SL-117-SA8N-SS-0.0-0.5	Antimony Tin	0.088 mg/Kg 2.6 mg/Kg	0.088U mg/Kg 2.6U mg/Kg
SL-118-SA8N-SS-0.0-0.5	Antimony Tin	0.11 mg/Kg 2.9 mg/Kg	0.11U mg/Kg 2.9U mg/Kg
SL-119-SA8N-SS-0.0-0.5	Antimony Tin	0.14 mg/Kg 2.6 mg/Kg	0.14U mg/Kg 2.6U mg/Kg
SL-125-SA8N-SS-0.0-0.5	Antimony Tin	0.15 mg/Kg 2.5 mg/Kg	0.15U mg/Kg 2.5U mg/Kg
SL-126-SA8N-SS-0.0-0.5	Antimony Tin	0.14 mg/Kg 2.3 mg/Kg	0.14U mg/Kg 2.3U mg/Kg
DUP06-SA8N-QC-042111	Antimony Tin	0.11 mg/Kg 2.5 mg/Kg	0.11U mg/Kg 2.5U mg/Kg
SL-004-SA8N-SB-4.0-5.0	Antimony Tin	0.11 mg/Kg 2.9 mg/Kg	0.11U mg/Kg 2.9U mg/Kg

Sample	Analyte	Reported Concentration	Modified Final Concentration
SL-004-SA8N-SB-9.0-10.0	Tin	2.4 mg/Kg	2.4U mg/Kg
SL-005-SA8N-SB-4.0-5.0	Tin	2.6 mg/Kg	2.6U mg/Kg
SL-005-SA8N-SB-8.0-9.0	Tin	2.2 mg/Kg	2.2U mg/Kg
SL-006-SA8N-SB-4.0-5.0	Antimony Tin	0.12 mg/Kg 2.2 mg/Kg	0.12U mg/Kg 2.2U mg/Kg
SL-006-SA8N-SB-8.0-9.0	Antimony Tin	0.13 mg/Kg 2.8 mg/Kg	0.13U mg/Kg 2.8U mg/Kg

No field blanks were identified in this SDG.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-119-SA8N-SS-0.0-0.5MS/MSD (All samples in SDG DE134)	Antimony	42 (75-125)	33 (75-125)	-	J (all detects) UJ (all non-detects)	A
SL-119-SA8N-SS-0.0-0.5MS/MSD (All samples in SDG DE134)	Chromium Lead Potassium	133 (75-125) - 126 (75-125)	- 140 (75-125) -	- - -	J (all detects) J (all detects) J (all detects)	A

VII. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Internal Standards

All internal standard percent recoveries (%R) were within QC limits.

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met with the following exceptions:

Diluted Sample	Analyte	%D (Limits)	Associated Samples	Flag	A or P
SL-119-SA8N-SS-0.0-0.5	Chromium Copper Vanadium	11 (≤10) 11 (≤10) 14 (≤10)	All samples in SDG DE134	J (all detects) UJ (all non-detects)	A

XII. Sample Result Verification

All sample result verifications were acceptable.

All metals reported below the RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG DE134	All analytes reported below the RL and above the MDL.	J (all detects)	A

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

Samples SL-119-SA8N-SS-0.0-0.5 and DUP06-SA8N-QC-042111 were identified as field duplicates. No metals were detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-119-SA8N-SS-0.0-0.5	DUP06-SA8N-QC-042111			
Aluminum	15200	14600	4 (≤50)	-	-
Antimony	0.14	0.11	24 (≤50)	-	-

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-119-SA8N-SS-0.0-0.5	DUP06-SA8N-QC-042111			
Arsenic	5.1	5.1	0 (≤50)	-	-
Barium	95.2	110	14 (≤50)	-	-
Beryllium	0.52	0.55	6 (≤50)	-	-
Boron	3.7	3.0	21 (≤50)	-	-
Cadmium	0.13	0.18	32 (≤50)	-	-
Calcium	3370	3270	3 (≤50)	-	-
Chromium	23.5	26.2	11 (≤50)	-	-
Cobalt	6.6	8.1	20 (≤50)	-	-
Copper	10.1	11.9	16 (≤50)	-	-
Iron	22400	22000	2 (≤50)	-	-
Lead	7.1	8.7	20 (≤50)	-	-
Lithium	27.5	26.2	5 (≤50)	-	-
Magnesium	6160	6220	1 (≤50)	-	-
Manganese	311	301	3 (≤50)	-	-
Mercury	0.019	0.022	15 (≤50)	-	-
Molybdenum	0.45	0.45	0 (≤50)	-	-
Nickel	13.9	16.7	18 (≤50)	-	-
Phosphorus	485	459	6 (≤50)	-	-
Potassium	3760	3680	2 (≤50)	-	-
Selenium	0.17	0.17	0 (≤50)	-	-
Silver	0.048	0.047	2 (≤50)	-	-
Sodium	89.8	82.1	9 (≤50)	-	-

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flags	A or P
	SL-119-SA8N-SS-0.0-0.5	DUP06-SA8N-QC-042111			
Strontium	16.8	15.7	7 (≤50)	-	-
Thallium	0.27	0.27	0 (≤50)	-	-
Tin	2.6	2.5	4 (≤50)	-	-
Titanium	1220	1190	2 (≤50)	-	-
Vanadium	39.4	43.7	10 (≤50)	-	-
Zinc	61.1	70.2	14 (≤50)	-	-

Santa Susana Field Laboratory
Metals - Data Qualification Summary - SDG DE134

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
DE134	SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5 DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0	Antimony	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE134	SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5 DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0	Chromium Lead Potassium	J (all detects) J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
DE134	SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5 DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0	Chromium Copper Vanadium	J (all detects) UJ (all non-detects)	A	ICP serial dilution (%D) (A)

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
DE134	SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5 DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification (Z)

Santa Susana Field Laboratory
Metals - Laboratory Blank Data Qualification Summary - SDG DE134

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
DE134	SL-111-SA8N-SS-0.0-0.5	Antimony Tin	0.12U mg/Kg 3.0U mg/Kg	A	B
DE134	SL-112-SA8N-SS-0.0-0.5	Antimony Tin	0.10U mg/Kg 2.7U mg/Kg	A	B
DE134	SL-115-SA8N-SS-0.0-0.5	Antimony Tin	0.13U mg/Kg 2.7U mg/Kg	A	B
DE134	SL-116-SA8N-SS-0.0-0.5	Antimony Tin	0.17U mg/Kg 2.4U mg/Kg	A	B
DE134	SL-117-SA8N-SS-0.0-0.5	Antimony Tin	0.088U mg/Kg 2.6U mg/Kg	A	B
DE134	SL-118-SA8N-SS-0.0-0.5	Antimony Tin	0.11U mg/Kg 2.9U mg/Kg	A	B
DE134	SL-119-SA8N-SS-0.0-0.5	Antimony Tin	0.14U mg/Kg 2.6U mg/Kg	A	B
DE134	SL-125-SA8N-SS-0.0-0.5	Antimony Tin	0.15U mg/Kg 2.5U mg/Kg	A	B
DE134	SL-126-SA8N-SS-0.0-0.5	Antimony Tin	0.14U mg/Kg 2.3U mg/Kg	A	B
DE134	DUP06-SA8N-QC-042111	Antimony Tin	0.11U mg/Kg 2.5U mg/Kg	A	B

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
DE134	SL-004-SA8N-SB-4.0-5.0	Antimony Tin	0.11U mg/Kg 2.9U mg/Kg	A	B
DE134	SL-004-SA8N-SB-9.0-10.0	Tin	2.4U mg/Kg	A	B
DE134	SL-005-SA8N-SB-4.0-5.0	Tin	2.6U mg/Kg	A	B
DE134	SL-005-SA8N-SB-8.0-9.0	Tin	2.2U mg/Kg	A	B
DE134	SL-006-SA8N-SB-4.0-5.0	Antimony Tin	0.12U mg/Kg 2.2U mg/Kg	A	B
DE134	SL-006-SA8N-SB-8.0-9.0	Antimony Tin	0.13U mg/Kg 2.8U mg/Kg	A	B

Santa Susana Field Laboratory
Metals - Field Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

LDC #: 26275B4

VALIDATION COMPLETENESS WORKSHEET

Level IV

Date: 10-7-11

SDG #: DE134

Page: 1 of 1

Laboratory: Lancaster Laboratories

Reviewer: QC

2nd Reviewer: VC

METHOD: Metals (EPA SW 846 Method 6010B/6020~~A~~/~~7000~~) 7471A

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/21/11
II.	ICP/MS Tune	A	
III.	Calibration	A	
IV.	Blanks	~~A~~SW	
V.	ICP Interference Check Sample (ICS) Analysis	SW	~~A~~
VI.	Matrix Spike Analysis	SW	MS/D
VII.	Duplicate Sample Analysis	A	DUP
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	A	
X.	Furnace Atomic Absorption QC	N	Not utilized
XI.	ICP Serial Dilution	SW	
XII.	Sample Result Verification	A	
XIII.	Overall Assessment of Data	A	
XIV.	Field Duplicates	SW	(7,10)
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Soil

1	SL-111-SA8N-SS-0.0-0.5	11	SL-004-SA8N-SB-4.0-5.0	21		31	
2	SL-112-SA8N-SS-0.0-0.5	12	SL-004-SA8N-SB-9.0-10.0	22		32	
3	SL-115-SA8N-SS-0.0-0.5	13	SL-005-SA8N-SB-4.0-5.0	23		33	
4	SL-116-SA8N-SS-0.0-0.5	14	SL-005-SA8N-SB-8.0-9.0	24		34	
5	SL-117-SA8N-SS-0.0-0.5	15	SL-006-SA8N-SB-4.0-5.0	25		35	
6	SL-118-SA8N-SS-0.0-0.5	16	SL-006-SA8N-SB-8.0-9.0	26		36	
7	SL-119-SA8N-SS-0.0-0.5	17	SL-119-SA8N-SS-0.0-0.5MS	27		37	
8	SL-125-SA8N-SS-0.0-0.5	18	SL-119-SA8N-SS-0.0-0.5MSD	28		38	
9	SL-126-SA8N-SS-0.0-0.5	19	SL-119-SA8N-SS-0.0-0.5DUP	29		39	
10	DUP06-SA8N-QC-042111	20		30		40	

Notes:

DC #: 262784

VALIDATION FINDINGS CHECKLIST

Reviewer: CR
2nd Reviewer: [illegible]

Method: Metals (EPA SW 846 Method 6010B/7000/6020)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. ICP/MS Tune				
Were all isotopes in the tuning solution mass resolution within 0.1 amu?	✓			
Were %RSD of isotopes in the tuning solution ≤5%?	✓			
III. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury) QC limits?	✓			
Were all initial calibration correlation coefficients > 0.995?	✓			
IV. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
V. ICP Interference Check Sample				
Were ICP interference check samples performed daily?	✓			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	✓			
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.		✓		
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of +/- RL(+/-2X RL for soil) was used for samples that were ≤ 5X the RL, including when only one of the duplicate sample values were < 5X the RL.	✓			
VII. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	✓			

DC #: 26275B4

VALIDATION FINDINGS CHECKLIST

Reviewer: AC
2nd Reviewer: [signature]

Validation Area	Yes	No	NA	Findings/Comments
VIII. Furnace Atomic Absorption QC				
If MSA was performed, was the correlation coefficients > 0.995?			/	
Do all applicable analysies have duplicate injections? (Level IV only)			/	
For sample concentrations > RL, are applicable duplicate injection RSD values < 20%? (Level IV only)			/	
Were analytical spike recoveries within the 85-115% QC limits?			/	
IX. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the MDL (ICP)/>100X the MDL(ICP/MS)?	/			
Were all percent differences (%Ds) < 10%?		/		
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.		/		
X. Internal Standards (EPA SW 846 Method 6020/EPA 200.8)				
Were all the percent recoveries (%R) within the 30-120% (6020)/60-125% (200.8) of the intensity of the internal standard in the associated initial calibration?	/			
If the %Rs were outside the criteria, was a reanalysis performed?	/			
XI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		/		
Were the performance evaluation (PE) samples within the acceptance limits?			/	
XII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	/			
XIII. Overall assessment of data	/			
Overall assessment of data was found to be acceptable.				
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	/			
Target analytes were detected in the field duplicates.	/			
XV. Field blanks				
Field blanks were identified in this SDG.		/		
Target analytes were detected in the field blanks.			/	

LDC #: 26275B~~A~~

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Page: 1 of 1
Reviewer: CR
2nd reviewer:

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1-16		[✓ Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr]
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
QC17-19		[✓ Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr]
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
Analysis Method		
ICP		[✓ Al, B, Ca, Fe, Li, Mg, Mn, P, K, Na, Sr, Sn, Ti, Zr]
ICP-MS		[✓ Sb, As, Ba, Be, Cd, Cr, Co, Cu, Pb, Mo, Ni, Se, Ag, Tl, V, Zn]

Comments: [✓ Mercury by CVAA if performed]

LDC #: 26275B4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Page: 1 of 1
Reviewer: CR
2nd Reviewer: L

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000)
Soil preparation factor applied: 100x; Hg:167
Reason: B
Sample Concentration units, unless otherwise noted: mg/Kg
Associated Samples: All

Analyte	Maximum PB[a] (mg/Kg)	Action Limit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
Sb	0.081	0.405	0.12	0.10	0.13	0.17	0.088	0.11	0.14	0.15	0.14	0.11	0.11				0.12	0.13			
Ca	7.666	38.33																			
Cu	0.394	1.97																			
P	1.172	5.86																			
Sn	1.333	6.665	3.0	2.7	2.7	2.4	2.6	2.9	2.6	2.5	2.3	2.5	2.9	2.4	2.6	2.2	2.2	2.8			
V	0.087	0.435																			

Sample Concentration units, unless otherwise noted: mg/Kg
Associated Samples: 2-6, 8-16

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	No Qualifiers										
Ti			0.57	0.285											

Sample Concentration units, unless otherwise noted: mg/Kg
Associated Samples: 1, 7

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	No Qualifiers										
Ti			0.51	0.255											

Sample Concentration units, unless otherwise noted: mg/Kg
Associated Samples: 12, 14, 15

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	No Qualifiers										
Ca			88.9	222.3											

Sample Concentration units, unless otherwise noted: mg/Kg
Associated Samples: 11

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	No Qualifiers										
Fe			97.8	244.5											

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".
Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC #: 26275B4

VALIDATION FINDINGS WORKSHEET
ICP Interference Check Sample

Reviewer: CR
2nd Reviewer:

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were ICP interference check samples performed as required?

(Y) N N/A Were the AB solution percent recoveries (%R) within the control limits of 80-120% ?

LEVEL IV ONLY:

(Y) N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Date	ICS Identification	Analyte	Concentration (ug/L)	Limit (<MDL)	Associated Samples	Qualifications
	5/4/11	ICSA (03:52/0603)	Mn	5	0.78	All	No Qual (>10x)

Comments:

LDC #: 26275B4

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: QR
2nd Reviewer:

METHOD: Trace metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a matrix spike analyzed for each matrix in this SDG?

Y N N/A Were matrix spike percent recoveries (%R) within the control limits of 75-125? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

Y N N/A Were all duplicate sample relative percent differences (RPD) ≤ 20% for water samples and ≤35% for soil samples?

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	MS/MSD ID	Matrix	Analyte	MS %Recovery	MSD %Recovery	RPD (Limits)	Associated Samples	Qualifications
	17/18	S	Sb	42	33		All	J/UJ/A (Q)
			Cr	133				J det/A
			Pb		140			
			K	126				

Comments:

LDC #: 26275C34

VALIDATION FINDINGS WORKSHEET
ICP Serial Dilution

Reviewer: CR
2nd Reviewer:

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A If analyte concentrations were > 50X the MDL (ICP) ,or >100X the MDL (ICP/MS), was a serial dilution analyzed?

Y N N/A Were ICP serial dilution percent differences (%D) ≤10%?

Y N N/A Is there evidence of negative interference? If yes, professional judgement will be used to qualify the data.

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Date	Diluted Sample ID	Matrix	Analyte	%D (Limits)	Associated Samples	Qualifications
		7	S	Cr	11	All	J/UJ/A (A)
				Cu	11	J	J
				V	14		

Comments:

LDC#: 26275B4

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: AV
2nd Reviewer: [illegible]

METHOD: Metals (EPA Method 6010B/7000)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Analyte	Concentration (mg/Kg)		RPD (≤50)	
	7	10		
Aluminum	15200	14600	4	
Antimony	0.14	0.11	24	
Arsenic	5.1	5.1	0	
Barium	95.2	110	14	
Beryllium	0.52	0.55	6	
Boron	3.7	3.0	21	
Cadmium	0.13	0.18	32	
Calcium	3370	3270	3	
Chromium	23.5	26.2	11	
Cobalt	6.6	8.1	20	
Copper	10.1	11.9	16	
Iron	22400	22000	2	
Lead	7.1	8.7	20	
Lithium	27.5	26.2	5	
Magnesium	6160	6220	1	
Manganese	311	301	3	
Mercury	0.019	0.022	15	
Molybdenum	0.45	0.45	0	
Nickel	13.9	16.7	18	

LDC#: 26275B4

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: SC
2nd Reviewer: MV

METHOD: Metals (EPA Method 6010B/7000)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Analyte	Concentration (mg/Kg)		RPD (≤50)	
	7	10		
Phosphorus	485	459	6	
Potassium	3760	3680	2	
Selenium	0.17	0.17	0	
Silver	0.048	0.047	2	
Sodium	89.8	82.1	9	
Strontium	16.8	15.7	7	
Thallium	0.27	0.27	0	
Tin	2.6	2.5	4	
Titanium	1220	1190	2	
Vanadium	39.4	43.7	10	
Zinc	61.1	70.2	14	

LDC #: 26275B4

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: CS
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

An Initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found / True x 100 Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated %R	Reported %R	Acceptable (Y/N)
ICV	ICP (Initial calibration)	Fe	32666.13	30000	108.9	108.9	Y
ICV	ICP/MS (Initial calibration)	Mo	51.59	50	103.2	103.2	
ICV	CVAA (Initial calibration)	Hg	2.48	2.5	99.2	99.2	
CCV	ICP (Continuing calibration)	Sr	525.12	500	105.0	105.0	
CCV	ICP/MS (Continuing calibration)	Ni	257.9	250	103.2	103.2	
CCV	CVAA (Continuing calibration)	Hg	1.06	1	106.	106	
	GFAA (Initial calibration)						
	GFAA (Continuing calibation)						

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B4

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: CR
2nd Reviewer:

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$\%D = \frac{|I-SDR|}{I} \times 100$ Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated %R / RPD / %D	Reported %R / RPD / %D	Acceptable (Y/N)
ICSAB	ICP interference check	Zn	22.4	20	112	112	Y
LCS	Laboratory control sample	As	46.6	48.0	97	97	
17	Matrix spike	Mo	(SSR-SR) 10.7969	10.2728	105	105	
19	Duplicate	Li	27.5274	27.2558	1	1	
7	ICP serial dilution	P	4633.51	4793.40	3	3	

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 3
Reviewer: CC
2nd reviewer:

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for Ni were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)}$

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

$$\frac{(100mL)(2)(6.74\mu g/L)}{0.887(g)(1000)} = 13.9\ mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	1	Al	19500	19500	Y
		Sb	0.12	0.12	
		As	4.3	4.3	
		Ba	127	127	
		Be	0.63	0.63	
		B	5.6	5.6	
		Cd	0.37	0.37	
		Ca	3460	3460	
		Cr	21.0	21.0	
		Co	7.2	7.2	
		Cu	12.2	12.2	
		Fe	25000	25000	
		Pb	17.8	17.8	
		Li	27.9	27.9	
		Mg	4690	4690	
		Mn	448	448	
		Hg	0.018	0.018	
		Mo	0.50	0.50	
		Ni	13.9	13.9	
		P	614	614	

Note:

LDC #: 26275B4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 3
Reviewer: CR
2nd reviewer: L

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for Tl were recalculated and verified using the following equation:

Concentration = (RD)(FV)(Dil) / (In. Vol.)

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

$$\frac{100mL(2)(1.272ng/L)}{0.9366(1.02g)(1000)} = 0.268 mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	1	K	4990	4990	
		Se	0.14	0.14	
		As	0.039	0.039	
		Na	80.4	80.4	
		Sr	25.0	25.0	
		Tl	0.31	0.31	
		Sn	3.0	3.0	
		Ti	1160	1160	
		V	33.8	33.8	
		Zn	101	101	
	7	Al	15200	15200	
		Sb	0.14	0.14	
		As	5.1	5.1	
		Ba	95.2	95.2	
		Be	0.52	0.52	
		B	3.7	3.7	
		Cd	0.13	0.13	
		Ca	3370	3370	
		Cr	23.5	23.5	

Note:

LDC #: 26275B4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 3 of 3
Reviewer: AC
2nd reviewer: N

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for _____ were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)}$

Recalculation: See previous page

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
	7	Ca	6.6	6.6	Y
		Cu	10.1	10.1	
		Fe	22400	22400	
		K	7.1	7.1	
		Li	27.5	27.5	
		Mg	6160	6160	
		Mn	311	311	
		Mo	0.019	0.019	
		Na	0.45	0.45	
		Ni	13.9	13.9	
		P	485	485	
		K	3760	3760	
		Se	0.17	0.17	
		As	0.048	0.048	
		Na	89.8	89.8	
		Sr	16.8	16.8	
		Tl	0.27	0.27	
		Sn	2.6	2.6	
		Ti	1220	1220	
		V	39.4	39.4	
		Zn	61.1	61.1	

Note: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 21, 2011

LDC Report Date: October 17, 2011

Matrix: Soil

Parameters: Wet Chemistry

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE134

Sample Identification

SL-111-SA8N-SS-0.0-0.5
SL-112-SA8N-SS-0.0-0.5
SL-115-SA8N-SS-0.0-0.5
SL-116-SA8N-SS-0.0-0.5
SL-117-SA8N-SS-0.0-0.5
SL-118-SA8N-SS-0.0-0.5
SL-119-SA8N-SS-0.0-0.5
SL-125-SA8N-SS-0.0-0.5
SL-126-SA8N-SS-0.0-0.5
DUP06-SA8N-QC-042111
SL-004-SA8N-SB-4.0-5.0
SL-004-SA8N-SB-9.0-10.0
SL-005-SA8N-SB-4.0-5.0
SL-005-SA8N-SB-8.0-9.0
SL-006-SA8N-SB-4.0-5.0
SL-006-SA8N-SB-8.0-9.0
SL-119-SA8N-SS-0.0-0.5MS
SL-119-SA8N-SS-0.0-0.5DUP
SL-004-SA8N-SB-4.0-5.0MS
SL-004-SA8N-SB-4.0-5.0DUP

Introduction

This data review covers 18 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 9012B for Cyanide, EPA Method 300.0 for Nitrate and Fluoride, EPA SW 846 Method 7199 for Hexavalent Chromium, and EPA Method 314.0 for Perchlorate.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

No field blanks were identified in this SDG.

V. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	%R (Limits)	Flag	A or P
SL-119-SA8N-SS-0.0-0.5MS (SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5 DUP06-SA8N-QC-042111)	Fluoride	64 (80-120)	J (all detects) UJ (all non-detects)	A
SL-119-SA8N-SS-0.0-0.5MS (All samples in SDG DE134)	Hexavalent chromium	131 (75-125)	J (all detects)	A
SL-004-SA8N-SB-4.0-5.0MS (SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0)	Fluoride	48 (80-120)	J (all detects) UJ (all non-detects)	A

VI. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Sample Result Verification

All sample result verifications were acceptable

All analytes reported below the RL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG DE134	All analytes reported below the RL and above the MDL.	J (all detects)	A

IX. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

X. Field Duplicates

Samples SL-119-SA8N-SS-0.0-0.5 and DUP06-SA8N-QC-042111 were identified as field duplicates. No contaminant concentrations were detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flag	A or P
	SL-119-SA8N-SS-0.0-0.5	DUP06-SA8N-QC-042111			
Fluoride	1.4	1.9	30 (≤50)	-	-
Hexavalent chromium	0.43	0.21U	200 (≤50)	J (all detects) UJ (all non-detects)	A

Santa Susana Field Laboratory
Wet Chemistry - Data Qualification Summary - SDG DE134

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
DE134	SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5 DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0	Fluoride	J (all detects) UJ (all non-detects)	A	Matrix spike analysis (%R) (Q)
DE134	SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5 DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0	Hexavalent chromium	J (all detects)	A	Matrix spike analysis (%R) (Q)
DE134	SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5 DUP06-SA8N-QC-042111 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification (Z)
DE134	SL-119-SA8N-SS-0.0-0.5 DUP06-SA8N-QC-042111	Hexavalent chromium	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Wet Chemistry – Laboratory Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Wet Chemistry - Field Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

LDC #: 26275B6 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/7/11
SDG #: DE134 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: dc
2nd Reviewer: W

METHOD: (Analyte) Cyanide (EPA SW846 Method 9012B), Nitrate-N, Fluoride (EPA Method 300.0), Hexavalent Chromium (EPA SW846 Method 7199), Perchlorate (EPA Method 314.0)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/21/11
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	A	
IV	Matrix Spike/Matrix Spike Duplicates	SW	MS
V	Duplicates	A	DUP
VI.	Laboratory control samples	A	LCS
VII.	Sample result verification	A	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	SW	(7,10)
X	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Soil

1	SL-111-SA8N-SS-0.0-0.5	11	SL-004-SA8N-SB-4.0-5.0	21		31	
2	SL-112-SA8N-SS-0.0-0.5	12	SL-004-SA8N-SB-9.0-10.0	22		32	
3	SL-115-SA8N-SS-0.0-0.5	13	SL-005-SA8N-SB-4.0-5.0	23		33	
4	SL-116-SA8N-SS-0.0-0.5	14	SL-005-SA8N-SB-8.0-9.0	24		34	
5	SL-117-SA8N-SS-0.0-0.5	15	SL-006-SA8N-SB-4.0-5.0	25		35	
6	SL-118-SA8N-SS-0.0-0.5	16	SL-006-SA8N-SB-8.0-9.0	26		36	
7	SL-119-SA8N-SS-0.0-0.5	17	SL-119-SA8N-SS-0.0-0.5MS	27		37	
8	SL-125-SA8N-SS-0.0-0.5	18	SL-119-SA8N-SS-0.0-0.5~~MSD~~ DUP	28		38	
9	SL-126-SA8N-SS-0.0-0.5	19	# 11 MS	29		39	
10	DUP06-SA8N-QC-042111	20	↓ DUP	30		40	

Notes:

DC #: 760C536

VALIDATION FINDINGS CHECKLIST

Reviewer: CC
2nd Reviewer: W

Method: Inorganics (EPA Method See cover)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial calibration correlation coefficients > 0.995?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?	✓			
Were titrant checks performed as required? (Level IV only)			✓	
Were balance checks performed as required? (Level IV only)			✓	
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
IV. Matrix spike/Matrix spike duplicates and Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.		✓		
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of ≤ CRDL(≤ 2X CRDL for soil) was used for samples that were ≤ 5X the CRDL, including when only one of the duplicate sample values were < 5X the CRDL.	✓			
V. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits?	✓			
VI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

Validation Area	Yes	No	NA	Findings/Comments
VII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Were detection limits < RL?	✓			
VIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
IX. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target analytes were detected in the field duplicates.	✓			
X. Field blanks				
Field blanks were identified in this SDG.		✓	✓	
Target analytes were detected in the field blanks.			✓	

LDC #: 26275B6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer:
2nd reviewer:

All circled methods are applicable to each sample.

Sample ID	Matrix	Parameter
1-9		pH TDS Cl [✓ F] [✓ NO_3] NO_2 SO_4 PO_4 ALK [✓ CN^-] NH_3 TKN TOC [✓ CR^{6+}] [✓ ClO_4]
10-16		pH TDS Cl [✓ F] NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC [✓ CR^{6+}] [✓ ClO_4]
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
QC:17,~~18~~		pH TDS Cl [✓ F] NO_3 NO_2 SO_4 PO_4 ALK [✓ CN^-] NH_3 TKN TOC [✓ CR^{6+}] [✓ ClO_4]
18		pH TDS Cl [✓ F] NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC [✓ CR^{6+}] [✓ ClO_4]
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4
		pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ClO_4

Comments:

LDC #: 76275B6

VALIDATION FINDINGS WORKSHEET
Matrix Spike Analysis

Page: 1 of 1
Reviewer: CR
2nd Reviewer: [illegible]

METHOD: Inorganics, Method Seacar

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a matrix spike analyzed for each matrix in this SDG?

Y N N/A Were matrix spike percent recoveries (%R) within the control limits of 75-125 (85-115% for Method 300.0)? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Date	Matrix Spike ID	Matrix	Analyte	%R	Associated Samples	Qualifications
		17	S	F	64 (80-120)	~~All~~ 1-10	J/UJ/A (Q)
				Cor	131 (75-125)	All	Jdet/A
		19	S	F	48 (80-120)	11-16	J/UJ/A

Comments:

LDC# 26275B6

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer:
2nd Reviewer:

Inorganics, Method See Cover

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Analyte	Concentration (mg/kg)		RPD (≤50)	
	7	10		
Fluoride	1.4	1.9	30	
Hexavalent Chromium	0.43	0.21U	200	J/UJ/A (FD)

V:\FIELD DUPLICATES\FD_inorganic\26275B6.wpd

LDC #: 26275B6

Validation Findings Worksheet
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: AR
2nd Reviewer: LA

Method: Inorganics, Method See Cover

The correlation coefficient (r) for the calibration of Cl04 was recalculated. Calibration date: ~~5/8/11~~ 5/8/11

An initial or continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

$$\%R = \frac{\text{Found} \times 100}{\text{True}}$$

Where, Found = concentration of each analyte measured in the analysis of the ICV or CCV solution
True = concentration of each analyte in the ICV or CCV source

Type of analysis	Analyte	Standard	Conc. (mg/L)	Area	Recalculated r or r^2	Reported r or r^2	Acceptable (Y/N)
Initial calibration	Cl04	s1	2	0.007	*0.9998*	0.9998	Y
		s2	4	0.008			
		s3	10	0.023			
		s4	25	0.071			
		s5	100	0.287			
Calibration verification	CN	CCV	0.15	0.15590	104	104	
Calibration verification	F	↓	1.5	1.6149	108	108	
Calibration verification	NO3	↓	↓	1.5552	104	104	↓

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 42675105

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: GR
2nd Reviewer: [illegible]

METHOD: Inorganics, Method See cover

Percent recoveries (%R) for a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

Sample ID	Type of Analysis	Element	Found / S (units)	True / D (units)	Recalculated %R / RPD	Reported %R / RPD	Acceptable (Y/N)
LCS	Laboratory control sample	NO3	10.7	10	107	-	Y
17	Matrix spike sample	CN	(SSR-SR) 4.8	4.9	98	98	Y
18	Duplicate sample	ClO4	ND	ND	0	0	Y

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 162758

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: CR
2nd reviewer:

METHOD: Inorganics, Method See cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments?
Y N N/A Are all detection limits below the CRQL?

Compound (analyte) results for F/NO3 reported with a positive detect were recalculated and verified using the following equation:

Concentration =

F: $y = 0.1890x - 0.0044$

NO_3: $y = 0.2959x - 0.0064$

Recalculation:

1: $F = \frac{(0.02 + 0.0044)50mL}{0.189(4.9g)(0.887)} = 1.5 mg/kg$

7: $NO_3 = \frac{(0.043 + 0.0064)50mL}{0.2959(4.985)(0.936)} = 1.8 mg/kg$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
0.887	1	F	1.5	1.5	Y
		NO3	1.9	1.9	
0.936	7	F	1.4	1.4	
		NO3	1.5	1.8	
		Cr6+	0.43	0.44	

Note:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	April 21, 2011
LDC Report Date:	October 11, 2011
Matrix:	Soil
Parameters:	Total Petroleum Hydrocarbons as Extractables
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE134

Sample Identification

SL-111-SA8N-SS-0.0-0.5
SL-112-SA8N-SS-0.0-0.5
SL-115-SA8N-SS-0.0-0.5
SL-116-SA8N-SS-0.0-0.5
SL-117-SA8N-SS-0.0-0.5
SL-118-SA8N-SS-0.0-0.5
SL-119-SA8N-SS-0.0-0.5
SL-125-SA8N-SS-0.0-0.5
SL-126-SA8N-SS-0.0-0.5
SL-119-SA8N-SS-0.0-0.5MS
SL-119-SA8N-SS-0.0-0.5MSD

Introduction

This data review covers 11 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Total Petroleum Hydrocarbons (TPH) as Extractables.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as extractable contaminants were found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. Surrogate recoveries (%R) were not within QC limits for several samples. Since the samples were diluted out, no data were qualified.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-119-SA8N-SS-0.0-0.5MS/MSD (SL-119-SA8N-SS-0.0-0.5)	Extractable fuel hydrocarbons (C15-C20)	-	185 (49-123)	29 (≤20)	J (all detects)	A

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE134	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG DE134

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE134	SL-119-SA8N-SS-0.0-0.5	Extractable fuel hydrocarbons (C15-C20)	J (all detects)	A	Matrix spike/Matrix spike duplicate (%R)(RPD) (Q)
DE134	SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

LDC #: 26275B8
SDG #: DE134
Laboratory: Lancaster Laboratories

VALIDATION COMPLETENESS WORKSHEET
Level IV

Date: 10/11/11
Page: 1 of 1
Reviewer: F
2nd Reviewer: C

METHOD: GC TPH as Extractables (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/21/11
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	SW	
VI.	Matrix spike/Matrix spike duplicates	SW	
VII.	Laboratory control samples	A	LCS
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:
SOIL

1	SL-111-SA8N-SS-0.0-0.5	11	#7 MSD	21		31	
2	SL-112-SA8N-SS-0.0-0.5	12		22		32	
3	SL-115-SA8N-SS-0.0-0.5	13	1st BLK 3718	23		33	
4	SL-116-SA8N-SS-0.0-0.5	14		24		34	
5	SL-117-SA8N-SS-0.0-0.5	15		25		35	
6	SL-118-SA8N-SS-0.0-0.5	16		26		36	
7	SL-119-SA8N-SS-0.0-0.5	17		27		37	
8	SL-125-SA8N-SS-0.0-0.5	18		28		38	
9	SL-126-SA8N-SS-0.0-0.5	19		29		39	
10	#7 MS	20		30		40	

Notes:

DC #: 26275B8
SDG #: all waters

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.				
Cooler temperature criteria was met.	✓			
II. Initial calibration	✓			
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?		✓		
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

.DC #: 260275 BY
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26275138

VALIDATION FINDINDS WORKSHEET
Surrogate Recovery

Reviewer: FT
2nd Reviewer:

METHOD: __ GC __ HPLC

Are surrogates required by the method? Yes____ or No____.

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were surrogates spiked into all samples and blanks?

Y N N/A Did all surrogate recoveries (%R) meet the QC limits?

#	Sample ID	Detector/ Column	Surrogate Compound	%R (Limits)	Qualifications
	3, 5, 6	surrogate	outside	limit ( )	no qual 75% DL
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
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				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene		
C	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin		
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin		
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate		
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

LDC #: 26275B8

Page: 1 of 1
Reviewer: FT
2nd Reviewer: A

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

[✓ Y] N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?
[✓ Y] N N/A Was an MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?
Y [✓ N] N/A Were the MS/MSD percent recoveries (%R) and relative percent differences (RPD) within QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	10 + 11	EFH (C15-C20)	( )	186 (49-123)	29 (20)	# 7	J/Adet (Q)
		EFH (C21-C30)	( )	1098 (49-123)	89 (20)	↓	no qual parent >4x sp amt
		EFH (C30-C40)	( )	1367 (↓)	69 (20)	↓	↓
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 26275 B8
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (788 std)	Recalculated CF (788 std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	4/26/11	C8 – C40	[illegible]	-	23827.7	23827.7	1.8	1.8
				23757.59	23757.6				
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B8
SDG #: pw conn

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: A

METHOD: GC ✓ HPLC_____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 0:42	5/3/11	C8-C40	143.99	149.26	149.26	3.7	3.7
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26263 15F

SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer:

METHOD: ✓ GC ___ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: # 1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
chlorobenzene	NS	1.0	0.648643	65	65	0
orthoterphenyl	✓	1.0	1.008418	101	101	0

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 26213F-0
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 2
Reviewer: EZ
2nd Reviewer: A

METHOD: ✓ GC ___HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added
RPD =(((SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 10 and 11

Compound	Spike Added (mg/kg)		Sample Conc. (mg/kg)	Spike Sample Concentration (mg/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	—	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
EFH (C8-C11)	0.84	0.84	ND	0.51	0.58	68	68	69	69	13	13

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B8
SDG #: mi cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: / GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = I LCS - LCSD I * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS 37118

Compound	Spike Added (mg/kg)		Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
EFH (C8-C11)	0.84	NA	0.52	NA	62	62	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B8
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #1 Compound Name EFH (C30-C40)

Concentration = $\frac{71955238\ (1000)}{23827.7\ (60)(0.887)(1000)}$

= 57 mg/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 21, 2011

LDC Report Date: October 12, 2011

Matrix: Soil

Parameters: Explosives

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE134

Sample Identification

SL-111-SA8N-SS-0.0-0.5
SL-112-SA8N-SS-0.0-0.5
SL-115-SA8N-SS-0.0-0.5
SL-116-SA8N-SS-0.0-0.5
SL-117-SA8N-SS-0.0-0.5
SL-118-SA8N-SS-0.0-0.5
SL-119-SA8N-SS-0.0-0.5
SL-125-SA8N-SS-0.0-0.5
SL-126-SA8N-SS-0.0-0.5
SL-004-SA8N-SB-4.0-5.0
SL-004-SA8N-SB-9.0-10.0
SL-005-SA8N-SB-4.0-5.0
SL-005-SA8N-SB-8.0-9.0
SL-006-SA8N-SB-4.0-5.0
SL-006-SA8N-SB-8.0-9.0

Introduction

This data review covers 15 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8330A for Explosives.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed for the primary (quantitation) column and confirmation column as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 .

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at the required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No explosive contaminants were found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE134	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

LDC #: 26275B40 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/11/11

SDG #: DE134 Level IV Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: HPLC Explosives (EPA SW 846 Method 8330A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/21/11
II	Initial calibration	A	%RSD ≤ 20, r2
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	N	client specified
VII.	Laboratory control samples	A	LCS ID
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

SOIL

1	SL-111-SA8N-SS-0.0-0.5	11	SL-004-SA8N-SB-9.0-10.0	21	PBLK20120	31	
2	SL-112-SA8N-SS-0.0-0.5	12	SL-005-SA8N-SB-4.0-5.0	22		32	
3	SL-115-SA8N-SS-0.0-0.5	13	SL-005-SA8N-SB-8.0-9.0	23		33	
4	SL-116-SA8N-SS-0.0-0.5	14	SL-006-SA8N-SB-4.0-5.0	24		34	
5	SL-117-SA8N-SS-0.0-0.5	15	SL-006-SA8N-SB-8.0-9.0	25		35	
6	SL-118-SA8N-SS-0.0-0.5	16		26		36	
7	SL-119-SA8N-SS-0.0-0.5	17		27		37	
8	SL-125-SA8N-SS-0.0-0.5	18		28		38	
9	SL-126-SA8N-SS-0.0-0.5	19		29		39	
10	SL-004-SA8N-SB-4.0-5.0	20		30		40	

Notes: _____

DC #: 260275134D
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FT
2nd Reviewer: C

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 26275 B4C
SDG #: all cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?			✓	
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26278V0
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ✓

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (std) 500.5/499.50	Recalculated CF. (std) 500.5/499.50	Reported Average CF (Initial)	Recalculated Average CF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	5/17/11	1,3,5 - TNB chrompack	1.99×10^2	1.99×10^2	2.02×10^2	2.02×10^2	2.7	2.7
			Nitrobenzene	2.09×10^2	2.09×10^2	2.11×10^2	2.11×10^2	3.3	3.3
2	ICAL	5/17/11	↓ Capcell	3.43×10^2	3.43×10^2	3.52×10^2	3.52×10^2	2.8	2.8
				1.69×10^2	1.69×10^2	1.80×10^2	1.80×10^2	6.3	6.3
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

INIC[illegible]SB

LDC #: 26275B4/0
SDG #: fw conn

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: A

METHOD: GC_____HPLC✓_____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV_28	5/18/11	1,3,5- TNB chrompack	500.50	494.90	494.90	1.1	1.1
	12:17		Nitro benzene	499.50	501.40	501.40	0.4	0.4
2	CCV_40	5/19/11	↓	1001.00	994.92	994.92	0.6	0.6
	0:51		↓	999.00	1036.11	1036.11	3.7	3.7
3	CCV_52	5/19/11	↓	500.50	492.39	492.39	1.6	1.6
	9:20		↓	499.50	502.62	502.62	0.2	0.2
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B4O
SDG #: fw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: C

METHOD: GC_____HPLC✓

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV_28	5/18/11	1,3,5-TNB (Ecpell chrompack)	NA				
	12:17		nitrobenzene	499.50	472.27	472.27	5.5	5.5
2	CCV_40	5/19/11	↓	NA				
	0:51			999.00	959.75	959.75	3.9	3.9
3	CCV_52	5/19/11	↓	NA				
	9:20			474.32	474.32	474.32	5.0	5.0
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: [illegible]

SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer: [illegible]

METHOD: ___ GC ✓ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
2-Nitro-m-xylene	chrompack	1922.767	2253.483	117	117	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 26275B4U
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: EO
2nd Reviewer: A

METHOD: ___ GC ~~HPLC~~

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)	2000.75	NA	1898.99	NA	95	95				
2,4,6-Trinitrotoluene (8330)	1999.2	NA	2179.46	NA	109	109	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B40
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: __ GC ✓ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration = _____

MD

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 21, 2011

LDC Report Date: October 11, 2011

Matrix: Soil

Parameters: Terphenyls

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE134

Sample Identification

SL-111-SA8N-SS-0.0-0.5
SL-112-SA8N-SS-0.0-0.5
SL-115-SA8N-SS-0.0-0.5
SL-116-SA8N-SS-0.0-0.5
SL-117-SA8N-SS-0.0-0.5
SL-118-SA8N-SS-0.0-0.5
SL-119-SA8N-SS-0.0-0.5
SL-125-SA8N-SS-0.0-0.5
SL-126-SA8N-SS-0.0-0.5
SL-119-SA8N-SS-0.0-0.5MS
SL-119-SA8N-SS-0.0-0.5MSD

Introduction

This data review covers 11 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Terphenyls.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No terphenyl contaminants were found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE134	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Terphenyls - Data Qualification Summary - SDG DE134

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE134	SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Terphenyls - Laboratory Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Terphenyls - Field Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

LDC #: 26275B41 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/11/11
SDG #: DE134 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: EJ
2nd Reviewer:

METHOD: GC Terphenyls (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/21/11
II	Initial calibration	A	%RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

	SOIL						
1	SL-111-SA8N-SS-0.0-0.5	11	PBLK18123	21		31	
2	SL-112-SA8N-SS-0.0-0.5	12		22		32	
3	SL-115-SA8N-SS-0.0-0.5	13	#7MS	23		33	
4	SL-116-SA8N-SS-0.0-0.5	14	#7MSD	24		34	
5	SL-117-SA8N-SS-0.0-0.5	15		25		35	
6	SL-118-SA8N-SS-0.0-0.5	16		26		36	
7	SL-119-SA8N-SS-0.0-0.5	17		27		37	
8	SL-125-SA8N-SS-0.0-0.5	18		28		38	
9	SL-126-SA8N-SS-0.0-0.5	19		29		39	
10		20		30		40	

Notes:

DC #: 260275B41
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

.DC #: 260275B4)
SDG #: all cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?			✓	
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?		✓		
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26275B4/
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported	Recalculated	Reported	Recalculated	Reported	Recalculated
				CF (15,520 std)	CF (15,520 std)	Average CF (initial)	Average CF (initial)	%RSD	%RSD
1	ICAL	4/12/11	m-Terphenyl	3.42×10^4	3.42×10^4	3.30×10^4	3.30×10^4	2.4	2.4
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275 B4/
SDG #: fw comm

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: EJ
2nd Reviewer: A

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 4:06	5/6/11	m-Terphenyl	31.04	32.74	32.74	5.5	5.5
	CCV 12:18	5/6/11	↓	37.04	33.55	33.55	8.1	8.1
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: [illegible]

SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer: A

METHOD: ✓ GC ___ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: # 1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
n-Triacontane-d62	NS	0.333	0.21356	64	64	0

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID: _____

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #:_____ VALIDATION FINDINGS WORKSHEET Page:___of___

SDG #: pw canes

Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: EZ

2nd Reviewer: A

METHOD: ___ GC ___HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration

SA = Spike added

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 13 + 14

Compound	Spike Added (mg/kg)		Sample Conc. (mg/kg)	Spike Sample Concentration (mg/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	—	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
m-Terphenyl	1.67	1.67	ND	1.35	1.39	81	81	83	83	3	3

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B41
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: EJ
2nd Reviewer: A

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: lcs18123

Compound	Spike Added (mg/kg)		Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
m-Terphenyl	1.67	NA	1.42	NA	85	85	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B4/
SDG #: 4U ones

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: 5
2nd Reviewer: A

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration =_____

ND

#	Sample ID	Compound	Reported Concentrations	Recalculated Results Concentrations	Qualifications

Comments: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 21, 2011

LDC Report Date: October 11, 2011

Matrix: Soil

Parameters: Alcohols

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE134

Sample Identification

SL-111-SA8N-SS-0.0-0.5
SL-112-SA8N-SS-0.0-0.5
SL-115-SA8N-SS-0.0-0.5
SL-116-SA8N-SS-0.0-0.5
SL-117-SA8N-SS-0.0-0.5
SL-118-SA8N-SS-0.0-0.5
SL-119-SA8N-SS-0.0-0.5
SL-125-SA8N-SS-0.0-0.5
SL-126-SA8N-SS-0.0-0.5

Introduction

This data review covers 9 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Alcohols.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No alcohol contaminants were found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE134	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Alcohols - Data Qualification Summary - SDG DE134

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE134	SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Alcohols - Laboratory Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Alcohols - Field Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

LDC #: 26275B43 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/11/11
SDG #: DE134 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: EZ
2nd Reviewer: A

METHOD: GC Alcohols (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/21/11
II	Initial calibration	A	% RSD ≤20
III.	Calibration verification/ICV	A	ICV/CCV ≤20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	N	client specified
VII.	Laboratory control samples	A	LCS
VIII.	Target compound identification	A	
IX.	Compound quantitation RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: SOIL

1	SL-111-SA8N-SS-0.0-0.5	11	PBLK37116	21		31	
2	SL-112-SA8N-SS-0.0-0.5	12		22		32	
3	SL-115-SA8N-SS-0.0-0.5	13		23		33	
4	SL-116-SA8N-SS-0.0-0.5	14		24		34	
5	SL-117-SA8N-SS-0.0-0.5	15		25		35	
6	SL-118-SA8N-SS-0.0-0.5	16		26		36	
7	SL-119-SA8N-SS-0.0-0.5	17		27		37	
8	SL-125-SA8N-SS-0.0-0.5	18		28		38	
9	SL-126-SA8N-SS-0.0-0.5	19		29		39	
10		20		30		40	

Notes:

DC #: 26275 B43
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

.DC #: 26275 B43
SDG #: all cont

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?			✓	
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26275 B43
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported $CF_{(SMV\ std)}$	Recalculated $CF_{(SMV\ std)}$	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	2/23/11	methanol	8.63×10^{0}	8.63×10^{0}	8.50×10^{0}	8.50×10^{0}	3.0	3.0
2	ICAL	4/20/11	methanol	3.37×10^{0}	3.37×10^{0}	3.49×10^{0}	3.49×10^{0}	3.3	3.3
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

INICIAL ISB

LDC #: 26275 B43
SDG #: fw cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 7
Reviewer: EJ
2nd Reviewer: A

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 16:18	4/27/11	methanol	5000.00	5143.53	5143.53	2.9	2.9
	CCV 19:17	4/27/11	methanol	5000.00	4999.51	4999.51	0	0
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: [illegible]

SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer: A

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Acetone	NA	2500	1919.04	77	77	0

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: 26075b43
SDG #: pw cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: F2
2nd Reviewer: A

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS37116

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Methane	2500	NA	2326.78	NA	93	93	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B43
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration = _____

ND

#	Sample ID	Compound	Reported Concentrations	Recalculated Results Concentrations	Qualifications

Comments: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 21, 2011

LDC Report Date: October 11, 2011

Matrix: Soil

Parameters: Glycols

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE134

Sample Identification

SL-111-SA8N-SS-0.0-0.5
SL-112-SA8N-SS-0.0-0.5
SL-115-SA8N-SS-0.0-0.5
SL-116-SA8N-SS-0.0-0.5
SL-117-SA8N-SS-0.0-0.5
SL-118-SA8N-SS-0.0-0.5
SL-119-SA8N-SS-0.0-0.5
SL-125-SA8N-SS-0.0-0.5
SL-126-SA8N-SS-0.0-0.5
SL-004-SA8N-SB-4.0-5.0
SL-004-SA8N-SB-9.0-10.0
SL-005-SA8N-SB-4.0-5.0
SL-005-SA8N-SB-8.0-9.0
SL-006-SA8N-SB-4.0-5.0
SL-006-SA8N-SB-8.0-9.0
SL-119-SA8N-SS-0.0-0.5MS
SL-119-SA8N-SS-0.0-0.5MSD

Introduction

This data review covers 17 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Glycols.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0%.

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 20.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

Retention times (RT) of all compounds in the calibration standards were within QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No glycol contaminants were found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE134	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Glycols - Data Qualification Summary - SDG DE134

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE134	SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5 SL-004-SA8N-SB-4.0-5.0 SL-004-SA8N-SB-9.0-10.0 SL-005-SA8N-SB-4.0-5.0 SL-005-SA8N-SB-8.0-9.0 SL-006-SA8N-SB-4.0-5.0 SL-006-SA8N-SB-8.0-9.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Glycols - Laboratory Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Glycols - Field Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

LDC #: 26275B45 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/11/11
SDG #: DE134 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: D
2nd Reviewer: A

METHOD: GC Glycols (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/21/11
II	Initial calibration	A	% PSD ≤20
III.	Calibration verification/ICV	A	ICV/CCV ≤20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:
SOIL

1 3	SL-111-SA8N-SS-0.0-0.5	11 2	SL-004-SA8N-SB-9.0-10.0	21 1	PBLK03115	31	
2 3	SL-112-SA8N-SS-0.0-0.5	12 2	SL-005-SA8N-SB-4.0-5.0	22 2	PBLK 24116	32	
3 1	SL-115-SA8N-SS-0.0-0.5	13 2	SL-005-SA8N-SB-8.0-9.0	23 3	PBLK01117	33	
4 1	SL-116-SA8N-SS-0.0-0.5	14 2	SL-006-SA8N-SB-4.0-5.0	24		34	
5 1	SL-117-SA8N-SS-0.0-0.5	15 2	SL-006-SA8N-SB-8.0-9.0	25		35	
6 1	SL-118-SA8N-SS-0.0-0.5	16	#7 MS	26		36	
7 2	SL-119-SA8N-SS-0.0-0.5	17	#7 MSD	27		37	
8 2	SL-125-SA8N-SS-0.0-0.5	18		28		38	
9 2	SL-126-SA8N-SS-0.0-0.5	19		29		39	
10 2	SL-004-SA8N-SB-4.0-5.0	20		30		40	

Notes:

DC #: 20275B45
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FT
2nd Reviewer: AC

Method: ✓ GC _____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

.DC #: 26275 B45
SDG #: all cont

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification.				
Were the retention times of reported detects within the RT windows?			✓	
XI. Compound quantitation/CRQLs.				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance.				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data.				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates.				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks.				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26275 B45
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: A

METHOD: GC ✓ HPLC ____

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (A_i/C_{std})	Recalculated CF (A_i/C_{std})	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	4/26/11	ethylene Glycol	4.96×10^2	4.96×10^2	4.98×10^2	4.98×10^2	5.6	5.6
2	ICAL	4/27/11	"	5.07×10^2	5.07×10^2	5.09×10^2	5.09×10^2	6.3	6.3
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

INIC! C 1SB

LDC #: 26275B45
SDG #: fw comm

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 7
Reviewer: EJ
2nd Reviewer: C

METHOD: GC ✓ HPLC ____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 13:26	4/26/11	ethylene glycol	302.10	333.75	333.73	10.5	10.5
	CCV 16:39	4/26/11	↓	105.56	120.71	120.71	14.4	14.4
2								
	CCV 15:27	4/27/11	↓	302.10	320.00	320.00	5.9	5.9
3	CCV 18:41	4/27/11	↓	105.56	111.26	111.26	5.4	5.4
	CCV 21:55	4/27/11	↓	105.56	110.21	110.21	4.4	4.4
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 42715 T3

SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer:

METHOD: ✓ GC ___ HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetramethylene glycol	ND	192.66	158.94154	82	82	0

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: _____ VALIDATION FINDINGS WORKSHEET Page: 1 of 2

SDG #: jw comer

Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FZ

2nd Reviewer: A

METHOD: ✓ GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike; MSD = Matrix spike duplicate

MS/MSD samples: 16 & 17

Compound	Spike Added (mg/kg)		Sample Conc. (mg/kg)	Spike Sample Concentration (mg/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
Ethylene Glycol	198.16	198.16	ND	179.75	197.71	91	91	100	100	10	10

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B4/5
SDG #: all cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: EO
2nd Reviewer: A

METHOD: ✓ GC __ HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = I LCS - LCSD I * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS03115

Compound	Spike Added (mg/kg)		Spiked Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Ethylene Glycol	198.16	NA	210.95	NA	101	101	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B45
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID._____ Compound Name _____

Concentration = _____

ND

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications

Comments: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	April 21, 2011
LDC Report Date:	October 12, 2011
Matrix:	Soil
Parameters:	Formaldehyde
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE134

Sample Identification

SL-111-SA8N-SS-0.0-0.5
SL-112-SA8N-SS-0.0-0.5
SL-115-SA8N-SS-0.0-0.5
SL-116-SA8N-SS-0.0-0.5
SL-117-SA8N-SS-0.0-0.5
SL-118-SA8N-SS-0.0-0.5
SL-119-SA8N-SS-0.0-0.5
SL-125-SA8N-SS-0.0-0.5
SL-126-SA8N-SS-0.0-0.5
SL-119-SA8N-SS-0.0-0.5MS
SL-119-SA8N-SS-0.0-0.5MSD

Introduction

This data review covers 11 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8315A for Formaldehyde.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

III. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 20.0% QC limits.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No formaldehyde was found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

Santa Susana Field Laboratory
Formaldehyde - Data Qualification Summary - SDG DE134

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE134	SL-111-SA8N-SS-0.0-0.5 SL-112-SA8N-SS-0.0-0.5 SL-115-SA8N-SS-0.0-0.5 SL-116-SA8N-SS-0.0-0.5 SL-117-SA8N-SS-0.0-0.5 SL-118-SA8N-SS-0.0-0.5 SL-119-SA8N-SS-0.0-0.5 SL-125-SA8N-SS-0.0-0.5 SL-126-SA8N-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Formaldehyde - Laboratory Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Formaldehyde - Field Blank Data Qualification Summary - SDG DE134

No Sample Data Qualified in this SDG

LDC #: 26275B71 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/11/11
SDG #: DE134 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: FT
2nd Reviewer:

METHOD: HPLC Formaldehyde (EPA SW 846 Method 8315A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/21/11
II	Initial calibration	A	%RSD ≤ 20
III.	Calibration verification/ICV	A	CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: SOIL

1	SL-111-SA8N-SS-0.0-0.5	11	PBLK04117	21		31	
2	SL-112-SA8N-SS-0.0-0.5	12		22		32	
3	SL-115-SA8N-SS-0.0-0.5	13		23		33	
4	SL-116-SA8N-SS-0.0-0.5	14	#7MS	24		34	
5	SL-117-SA8N-SS-0.0-0.5	15	#7MSD	25		35	
6	SL-118-SA8N-SS-0.0-0.5	16		26		36	
7	SL-119-SA8N-SS-0.0-0.5	17		27		37	
8	SL-125-SA8N-SS-0.0-0.5	18		28		38	
9	SL-126-SA8N-SS-0.0-0.5	19		29		39	
10		20		30		40	

Notes:

DC #: 46275 B71
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Method: ✓ GC ✓ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation?		✓		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

DC #: 26275871
SDG #: all cancel

VALIDATION FINDINGS CHECKLIST

Reviewer: FJ
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC #: 26275B7 1
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: FJ
2nd Reviewer:

METHOD: GC VA HPLC ✓

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C
average CF = sum of the CF/number of standards
%RSD = 100 * (S/X)

A = Area of compound,
C = Concentration of compound,
S = Standard deviation of the CF
X = Mean of the CFs

#	Standard ID	Calibration Date	Compound	Reported CF (2002std)	Recalculated CF (2002std)	Reported Average CF (initial)	Recalculated Average CF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL	4/28/11	Formaldehyde	6.47X10^1	6.47X10^1	6.11 X10^1	6.11X10^1	3.7	3.7
2									
3									
4									

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

INICIAL SB

LDC #: 26275B71
SDG #: fw conn

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: F2
2nd Reviewer: C

METHOD: GC_____HPLC✓

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 2:39	4/29/11	Formaldehyde	2002.00	2078.33	2078.33	3.8	3.8
2	CCV 4:24	4/29/11	✓	✓	2048.02	2048.02	2.3	2.3
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: [illegible]

SDG #: see cover

METHOD: __ GC __ HPLC

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT

2nd reviewer: [signature]

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Butyraldehyde	NS	2000	3943.7 1118/2	100	99.0	1.0

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

LDC #: [illegible]
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: [illegible]
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: __ GC ✓ HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked sample concentration SC = Sample concentration
SA = Spike added

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike MSD = Matrix spike duplicate

MS/MSD samples: 14 & 15

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
Formaldehyde	5010	5010	948.37	5337.24	5552.2	88	88	92	92	4	4

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B71
SDG #: all covers

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: __ GC ✓ HPLC

The percent recoveries (%R) and Relative Percent difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100* (SSC-SC)/SA
RPD = | LCS - LCSD | * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory control sample percent recovery
SC = Concentration
LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS04117

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Formaldehyde.	5010	NA	486066	NA	97	97	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B71
SDG #: [illegible]

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: __ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= $\frac{(A)(Fv)(Df)}{(RF)(Vs \text{ or } Ws)(\%S/100)}$

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #1 Compound Name Formaldehyde

Concentration = $\frac{8353)\ (20)}{6.11\times10^{7}\ (20.2)\ (0.887)}$

= 1526 ug/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Quallfications

Comments: _____

SAMPCALow.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	April 21, 2011
LDC Report Date:	October 11, 2011
Matrix:	Soil
Parameters:	Perchlorate
Validation Level:	Level IV
Laboratory:	Lancaster Laboratories
Sample Delivery Group (SDG):	DE134

Sample Identification

SL-111-SA8N-SS-0.0-0.5
SL-115-SA8N-SS-0.0-0.5
SL-116-SA8N-SS-0.0-0.5
SL-118-SA8N-SS-0.0-0.5
SL-125-SA8N-SS-0.0-0.5
SL-111-SA8N-SS-0.0-0.5MS
SL-111-SA8N-SS-0.0-0.5MSD

Introduction

This data review covers 7 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6850 for Perchlorate.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990 .

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 15.0% for unlabeled compounds and less than or equal to 50.0% for labeled compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 15.0% for unlabeled compounds and less than or equal to 50.0% for labeled compounds.

The percent differences (%D) of the limit of detection verification (LODV) calibration standard were less than or equal to 50.0% for perchlorate.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No perchlorate was found in the method blanks.

No field blanks were identified in this SDG.

VI. Surrogate Spikes

Surrogate spikes were not required by the method.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE134	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

LDC #: 26275B87 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/11/11
SDG #: DE134 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: FJ
2nd Reviewer: C

METHOD: LC/MS Perchlorate (EPA SW846 Method 6850)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/21/11
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	r2
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 15/50 LODV ≤ 50
V.	Blanks	A	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

SOIL

1	SL-111-SA8N-SS-0.0-0.5	11	PBLK20122	21		31	
2	SL-115-SA8N-SS-0.0-0.5	12		22		32	
3	SL-116-SA8N-SS-0.0-0.5	13		23		33	
4	SL-118-SA8N-SS-0.0-0.5	14		24		34	
5	SL-125-SA8N-SS-0.0-0.5	15		25		35	
6	#1MS	16		26		36	
7	#1MSD	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 46275 B87

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: FT
2nd Reviewer: A

LCMS Perchlorate Method 6850

Method: ~~Semivolatiles (EPA SW 846 Method 8270C)~~

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			✓	
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?			✓	
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ~~≤ 25%~~ 15/30 and relative response factors (RRF) ≥ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogates				
Were all surrogate %R within QC limits?			✓	
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicate				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

LDC #: 26275B87

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within + 30 seconds from the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?			✓	
Did compound spectra meet specified EPA "Functional Guidelines" criteria?			✓	
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?			✓	
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

LDC # 26275B87
SDG# see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: PJ
2nd Reviewer:

METHOD: Method 6850

Parameter: perchlorate

Date	Column	Compound	y	x	
05/04/2011	LCMS	perchlorate	0.03	0.020	0.0004
			0.04	0.040	0.0016
			0.10	0.100	0.0100
			0.20	0.200	0.0400
			0.42	0.400	0.1600
			1.03	1.000	1.0000
			2.56	2.500	6.2500

Regression Output:		Regression Output:	Reported	
Constant		0.00322		3.2000E-003
Std Err of Y Est		0.00484		
R Squared		0.99998		0.99990
No. of Observations		7.00000		
Degrees of Freedom		5.00000		
X Coefficient(s)	1.022E+000		0.10220	
Std Err of Coef.	0.002195	0.02		

LDC #: 26275887

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: ~~GC/MS BNA (EPA SW 846 Method 8270C).~~ 6850

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	MS6P1241101C	5/4/11	~~Phenol~~ Perchlorate (1st internal standard)	4	4.2	4.2	5	5
	10:13		Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
2	MS6P1241102C	5/4/11	~~Phenol~~ Perchlorate (1st internal standard)	0.4	0.336	0.336	16	16
	11:21		Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
3			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B87

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer: C

Perchlorate Meth 6850

METHOD: ~~GC/MS BNA (EPA SW 846 Method 8270)~~

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentation

RPD = | MSC - MSC | * 2/(MSC + MSDC) MSC = Matrix spike concentration; MSDC = Matrix spike duplicate concentration

MS/MSD samples: 6 + 7

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/g)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol											
N-Nitroso-di-n-propylamine											
4-Chloro-3-methylphenol											
Acenaphthene											
Pentachlorophenol											
Pyrene											
Perchlorate	100	100	ND	107	111	107	107	111	111	4	4

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275B87

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: ~~GC/MS BNA (EPA SW-846 Method 8270)~~ 6852

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: LCS 20122

Compound	Spike Added (ug/kg)		Spike Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene										
Pentachlorophenol										
Pyrene										
Perchlorate	10U	NA	10U	NA	10U	10U	NA			

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26275887

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: FT
2nd reviewer: C

METHOD: ~~GC/MS BNA (EPA SW 846 Method 8270)~~ method 8270

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. _____ , _____:

Conc. = $\frac{(\quad)(\quad)(\quad)(\quad)(\quad)(\quad)}{(\quad)(\quad)(\quad)(\quad)(\quad)(\quad)}$

ND

=

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

SAMPLE DELIVERY GROUP

DE135

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
22-Apr-2011	TB-042211	6267481	TB	5030B	8015M	III
22-Apr-2011	TB-042211	6267481	TB	5030B	8260B	III
22-Apr-2011	TB-042211	6267481	TB	5030B	8260B SIM	III
22-Apr-2011	SL-007-SA8N-SB-4.0-5.0	6267467	N	3050B	6010B	III
22-Apr-2011	SL-007-SA8N-SB-4.0-5.0	6267467	N	3050B	6020	III
22-Apr-2011	SL-007-SA8N-SB-4.0-5.0	6267467	N	3060A	7199	III
22-Apr-2011	SL-007-SA8N-SB-4.0-5.0	6267467	N	3550B	8082	III
22-Apr-2011	SL-007-SA8N-SB-4.0-5.0	6267467	N	3550B	8270C	III
22-Apr-2011	SL-007-SA8N-SB-4.0-5.0	6267467	N	3550B	8270C SIM	III
22-Apr-2011	SL-007-SA8N-SB-4.0-5.0	6267467	N	5035	8260B	III
22-Apr-2011	SL-007-SA8N-SB-4.0-5.0	6267467	N	5035	8260B SIM	III
22-Apr-2011	SL-007-SA8N-SB-4.0-5.0	6267467	N	METHOD	300.0	III
22-Apr-2011	SL-007-SA8N-SB-4.0-5.0	6267467	N	METHOD	314.0	III
22-Apr-2011	SL-007-SA8N-SB-4.0-5.0	6267467	N	METHOD	7471A	III
22-Apr-2011	SL-007-SA8N-SB-4.0-5.0	6267467	N	METHOD	8015M	III
22-Apr-2011	SL-007-SA8N-SB-4.0-5.0MSD	P267467M321858A	MSD	METHOD	8015M	III
22-Apr-2011	SL-007-SA8N-SB-4.0-5.0MS	P267467R321823A	MS	METHOD	8015M	III
22-Apr-2011	SL-007-SA8N-SB-9.0-10	6267468	N	3050B	6010B	III
22-Apr-2011	SL-007-SA8N-SB-9.0-10	6267468	N	3050B	6020	III
22-Apr-2011	SL-007-SA8N-SB-9.0-10	6267468	N	3060A	7199	III
22-Apr-2011	SL-007-SA8N-SB-9.0-10	6267468	N	3550B	8082	III
22-Apr-2011	SL-007-SA8N-SB-9.0-10	6267468	N	3550B	8270C	III
22-Apr-2011	SL-007-SA8N-SB-9.0-10	6267468	N	3550B	8270C SIM	III
22-Apr-2011	SL-007-SA8N-SB-9.0-10	6267468	N	METHOD	300.0	III
22-Apr-2011	SL-007-SA8N-SB-9.0-10	6267468	N	METHOD	314.0	III
22-Apr-2011	SL-007-SA8N-SB-9.0-10	6267468	N	METHOD	7471A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
22-Apr-2011	SL-007-SA8N-SB-9.0-10	6267468	N	METHOD	8015M	III
22-Apr-2011	SL-007-SA8N-SB-9.0-10MSD	P267468M321956A	MSD	METHOD	8015M	III
22-Apr-2011	SL-007-SA8N-SB-9.0-10MS	P267468R321938A	MS	METHOD	8015M	III
22-Apr-2011	SL-010-SA8N-SB-4.0-5.0	6267469	N	3050B	6010B	III
22-Apr-2011	SL-010-SA8N-SB-4.0-5.0	6267469	N	3050B	6020	III
22-Apr-2011	SL-010-SA8N-SB-4.0-5.0	6267469	N	3060A	7199	III
22-Apr-2011	SL-010-SA8N-SB-4.0-5.0	6267469	N	3546	1625C	III
22-Apr-2011	SL-010-SA8N-SB-4.0-5.0	6267469	N	3550B	8015B	III
22-Apr-2011	SL-010-SA8N-SB-4.0-5.0	6267469	N	3550B	8015M	III
22-Apr-2011	SL-010-SA8N-SB-4.0-5.0	6267469	N	3550B	8082	III
22-Apr-2011	SL-010-SA8N-SB-4.0-5.0	6267469	N	3550B	8270C	III
22-Apr-2011	SL-010-SA8N-SB-4.0-5.0	6267469	N	3550B	8270C SIM	III
22-Apr-2011	SL-010-SA8N-SB-4.0-5.0	6267469	N	5035	8015M	III
22-Apr-2011	SL-010-SA8N-SB-4.0-5.0	6267469	N	5035	8260B	III
22-Apr-2011	SL-010-SA8N-SB-4.0-5.0	6267469	N	5035	8260B SIM	III
22-Apr-2011	SL-010-SA8N-SB-4.0-5.0	6267469	N	8330	8330A	III
22-Apr-2011	SL-010-SA8N-SB-4.0-5.0	6267469	N	METHOD	300.0	III
22-Apr-2011	SL-010-SA8N-SB-4.0-5.0	6267469	N	METHOD	314.0	III
22-Apr-2011	SL-010-SA8N-SB-4.0-5.0	6267469	N	METHOD	7471A	III
22-Apr-2011	SL-010-SA8N-SB-4.0-5.0	6267469	N	METHOD	8015B	III
22-Apr-2011	SL-010-SA8N-SB-4.0-5.0	6267469	N	METHOD	8015M	III
22-Apr-2011	SL-010-SA8N-SB-4.0-5.0	6267469	N	METHOD	8315A	III
22-Apr-2011	SL-010-SA8N-SB-4.0-5.0	6267469	N	METHOD	9012B	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0	6267473	N	3050B	6010B	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0	6267473	N	3050B	6020	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0	6267473	N	3060A	7199	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0	6267473	N	3550B	8082	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0	6267473	N	3550B	8270C	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0	6267473	N	3550B	8270C SIM	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0	6267473	N	5035	8260B	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0	6267473	N	5035	8260B SIM	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0	6267473	N	METHOD	300.0	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0	6267473	N	METHOD	314.0	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0	6267473	N	METHOD	7471A	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0MS	6267474	MS	3050B	6010B	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0MS	6267474	MS	3050B	6020	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0MS	6267474	MS	3060A	7199	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0MS	6267474	MS	3550B	8082	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0MS	6267474	MS	3550B	8270C	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0MS	6267474	MS	3550B	8270C SIM	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0MS	6267474	MS	5035	8260B	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0MS	6267474	MS	5035	8260B SIM	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0MS	6267474	MS	METHOD	300.0	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0MS	6267474	MS	METHOD	314.0	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0MS	6267474	MS	METHOD	7471A	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0MSD	6267475	MSD	3050B	6010B	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0MSD	6267475	MSD	3050B	6020	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0MSD	6267475	MSD	3550B	8082	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0MSD	6267475	MSD	3550B	8270C	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0MSD	6267475	MSD	3550B	8270C SIM	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0MSD	6267475	MSD	5035	8260B	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0MSD	6267475	MSD	5035	8260B SIM	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0MSD	6267475	MSD	METHOD	7471A	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0DUP	6267476	DUP	3050B	6010B	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0DUP	6267476	DUP	3050B	6020	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0DUP	6267476	DUP	3060A	7199	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0DUP	6267476	DUP	METHOD	300.0	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0DUP	6267476	DUP	METHOD	314.0	III
22-Apr-2011	SL-064-SA5A-SB-3.0-4.0DUP	6267476	DUP	METHOD	7471A	III
22-Apr-2011	DUP16-SA5A-QC-042211	6267480	FD	3050B	6010B	III
22-Apr-2011	DUP16-SA5A-QC-042211	6267480	FD	3050B	6020	III
22-Apr-2011	DUP16-SA5A-QC-042211	6267480	FD	3060A	7199	III
22-Apr-2011	DUP16-SA5A-QC-042211	6267480	FD	3550B	8082	III
22-Apr-2011	DUP16-SA5A-QC-042211	6267480	FD	3550B	8270C	III
22-Apr-2011	DUP16-SA5A-QC-042211	6267480	FD	3550B	8270C SIM	III
22-Apr-2011	DUP16-SA5A-QC-042211	6267480	FD	5035	8260B	III
22-Apr-2011	DUP16-SA5A-QC-042211	6267480	FD	5035	8260B SIM	III
22-Apr-2011	DUP16-SA5A-QC-042211	6267480	FD	METHOD	300.0	III
22-Apr-2011	DUP16-SA5A-QC-042211	6267480	FD	METHOD	314.0	III
22-Apr-2011	DUP16-SA5A-QC-042211	6267480	FD	METHOD	7471A	III
22-Apr-2011	DUP16-SA5A-QC-042211DUP	P267480D270416B	DUP	METHOD	300.0	III
22-Apr-2011	DUP16-SA5A-QC-042211DUP	P267480D270431B	DUP	METHOD	314.0	III
22-Apr-2011	DUP16-SA5A-QC-042211MS	P267480R270430B	MS	METHOD	300.0	III
22-Apr-2011	DUP16-SA5A-QC-042211MS	P267480R270453B	MS	METHOD	314.0	III
22-Apr-2011	SL-010-SA8N-SB-9.0-10	6267470	N	3050B	6010B	III
22-Apr-2011	SL-010-SA8N-SB-9.0-10	6267470	N	3050B	6020	III
22-Apr-2011	SL-010-SA8N-SB-9.0-10	6267470	N	3060A	7199	III
22-Apr-2011	SL-010-SA8N-SB-9.0-10	6267470	N	3546	1625C	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
22-Apr-2011	SL-010-SA8N-SB-9.0-10	6267470	N	3550B	8015B	III
22-Apr-2011	SL-010-SA8N-SB-9.0-10	6267470	N	3550B	8015M	III
22-Apr-2011	SL-010-SA8N-SB-9.0-10	6267470	N	3550B	8082	III
22-Apr-2011	SL-010-SA8N-SB-9.0-10	6267470	N	3550B	8270C	III
22-Apr-2011	SL-010-SA8N-SB-9.0-10	6267470	N	3550B	8270C SIM	III
22-Apr-2011	SL-010-SA8N-SB-9.0-10	6267470	N	5035	8015M	III
22-Apr-2011	SL-010-SA8N-SB-9.0-10	6267470	N	5035	8260B	III
22-Apr-2011	SL-010-SA8N-SB-9.0-10	6267470	N	5035	8260B SIM	III
22-Apr-2011	SL-010-SA8N-SB-9.0-10	6267470	N	8330	8330A	III
22-Apr-2011	SL-010-SA8N-SB-9.0-10	6267470	N	METHOD	300.0	III
22-Apr-2011	SL-010-SA8N-SB-9.0-10	6267470	N	METHOD	314.0	III
22-Apr-2011	SL-010-SA8N-SB-9.0-10	6267470	N	METHOD	7471A	III
22-Apr-2011	SL-010-SA8N-SB-9.0-10	6267470	N	METHOD	8015B	III
22-Apr-2011	SL-010-SA8N-SB-9.0-10	6267470	N	METHOD	8015M	III
22-Apr-2011	SL-010-SA8N-SB-9.0-10	6267470	N	METHOD	8315A	III
22-Apr-2011	SL-010-SA8N-SB-9.0-10	6267470	N	METHOD	9012B	III
22-Apr-2011	SL-010-SA8N-SB-9.0-10MSD	P267470M321853A	MSD	METHOD	8015B	III
22-Apr-2011	SL-010-SA8N-SB-9.0-10MS	P267470R321838A	MS	METHOD	8015B	III
22-Apr-2011	SL-011-SA8N-SB-9.0-10.0	6267472	N	3050B	6010B	III
22-Apr-2011	SL-011-SA8N-SB-9.0-10.0	6267472	N	3050B	6020	III
22-Apr-2011	SL-011-SA8N-SB-9.0-10.0	6267472	N	3060A	7199	III
22-Apr-2011	SL-011-SA8N-SB-9.0-10.0	6267472	N	3546	1625C	III
22-Apr-2011	SL-011-SA8N-SB-9.0-10.0	6267472	N	3550B	8015B	III
22-Apr-2011	SL-011-SA8N-SB-9.0-10.0	6267472	N	3550B	8015M	III
22-Apr-2011	SL-011-SA8N-SB-9.0-10.0	6267472	N	3550B	8082	III
22-Apr-2011	SL-011-SA8N-SB-9.0-10.0	6267472	N	3550B	8270C	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
22-Apr-2011	SL-011-SA8N-SB-9.0-10.0	6267472	N	3550B	8270C SIM	III
22-Apr-2011	SL-011-SA8N-SB-9.0-10.0	6267472	N	5035	8015M	III
22-Apr-2011	SL-011-SA8N-SB-9.0-10.0	6267472	N	5035	8260B	III
22-Apr-2011	SL-011-SA8N-SB-9.0-10.0	6267472	N	5035	8260B SIM	III
22-Apr-2011	SL-011-SA8N-SB-9.0-10.0	6267472	N	8330	8330A	III
22-Apr-2011	SL-011-SA8N-SB-9.0-10.0	6267472	N	METHOD	300.0	III
22-Apr-2011	SL-011-SA8N-SB-9.0-10.0	6267472	N	METHOD	314.0	III
22-Apr-2011	SL-011-SA8N-SB-9.0-10.0	6267472	N	METHOD	7471A	III
22-Apr-2011	SL-011-SA8N-SB-9.0-10.0	6267472	N	METHOD	8015B	III
22-Apr-2011	SL-011-SA8N-SB-9.0-10.0	6267472	N	METHOD	8015M	III
22-Apr-2011	SL-011-SA8N-SB-9.0-10.0	6267472	N	METHOD	8315A	III
22-Apr-2011	SL-011-SA8N-SB-9.0-10.0	6267472	N	METHOD	9012B	III
22-Apr-2011	SL-011-SA8N-SB-4.0-5.0	6267471	N	3050B	6010B	III
22-Apr-2011	SL-011-SA8N-SB-4.0-5.0	6267471	N	3050B	6020	III
22-Apr-2011	SL-011-SA8N-SB-4.0-5.0	6267471	N	3060A	7199	III
22-Apr-2011	SL-011-SA8N-SB-4.0-5.0	6267471	N	3546	1625C	III
22-Apr-2011	SL-011-SA8N-SB-4.0-5.0	6267471	N	3550B	8015B	III
22-Apr-2011	SL-011-SA8N-SB-4.0-5.0	6267471	N	3550B	8015M	III
22-Apr-2011	SL-011-SA8N-SB-4.0-5.0	6267471	N	3550B	8082	III
22-Apr-2011	SL-011-SA8N-SB-4.0-5.0	6267471	N	3550B	8270C	III
22-Apr-2011	SL-011-SA8N-SB-4.0-5.0	6267471	N	3550B	8270C SIM	III
22-Apr-2011	SL-011-SA8N-SB-4.0-5.0	6267471	N	5035	8015M	III
22-Apr-2011	SL-011-SA8N-SB-4.0-5.0	6267471	N	5035	8260B	III
22-Apr-2011	SL-011-SA8N-SB-4.0-5.0	6267471	N	5035	8260B SIM	III
22-Apr-2011	SL-011-SA8N-SB-4.0-5.0	6267471	N	8330	8330A	III
22-Apr-2011	SL-011-SA8N-SB-4.0-5.0	6267471	N	METHOD	300.0	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
22-Apr-2011	SL-011-SA8N-SB-4.0-5.0	6267471	N	METHOD	314.0	III
22-Apr-2011	SL-011-SA8N-SB-4.0-5.0	6267471	N	METHOD	7471A	III
22-Apr-2011	SL-011-SA8N-SB-4.0-5.0	6267471	N	METHOD	8015B	III
22-Apr-2011	SL-011-SA8N-SB-4.0-5.0	6267471	N	METHOD	8015M	III
22-Apr-2011	SL-011-SA8N-SB-4.0-5.0	6267471	N	METHOD	8315A	III
22-Apr-2011	SL-011-SA8N-SB-4.0-5.0	6267471	N	METHOD	9012B	III
22-Apr-2011	SL-166-SA5A-SS-0.0-0.5	6267477	N	3050B	6010B	III
22-Apr-2011	SL-166-SA5A-SS-0.0-0.5	6267477	N	3050B	6020	III
22-Apr-2011	SL-166-SA5A-SS-0.0-0.5	6267477	N	3060A	7199	III
22-Apr-2011	SL-166-SA5A-SS-0.0-0.5	6267477	N	3550B	8082	III
22-Apr-2011	SL-166-SA5A-SS-0.0-0.5	6267477	N	3550B	8270C	III
22-Apr-2011	SL-166-SA5A-SS-0.0-0.5	6267477	N	3550B	8270C SIM	III
22-Apr-2011	SL-166-SA5A-SS-0.0-0.5	6267477	N	METHOD	300.0	III
22-Apr-2011	SL-166-SA5A-SS-0.0-0.5	6267477	N	METHOD	314.0	III
22-Apr-2011	SL-166-SA5A-SS-0.0-0.5	6267477	N	METHOD	7471A	III
22-Apr-2011	SL-253-SA5A-SB-4.0-5.0	6267478	N	3050B	6010B	III
22-Apr-2011	SL-253-SA5A-SB-4.0-5.0	6267478	N	3050B	6020	III
22-Apr-2011	SL-253-SA5A-SB-4.0-5.0	6267478	N	3060A	7199	III
22-Apr-2011	SL-253-SA5A-SB-4.0-5.0	6267478	N	3550B	8082	III
22-Apr-2011	SL-253-SA5A-SB-4.0-5.0	6267478	N	3550B	8270C	III
22-Apr-2011	SL-253-SA5A-SB-4.0-5.0	6267478	N	3550B	8270C SIM	III
22-Apr-2011	SL-253-SA5A-SB-4.0-5.0	6267478	N	5035	8260B	III
22-Apr-2011	SL-253-SA5A-SB-4.0-5.0	6267478	N	5035	8260B SIM	III
22-Apr-2011	SL-253-SA5A-SB-4.0-5.0	6267478	N	METHOD	300.0	III
22-Apr-2011	SL-253-SA5A-SB-4.0-5.0	6267478	N	METHOD	314.0	III
22-Apr-2011	SL-253-SA5A-SB-4.0-5.0	6267478	N	METHOD	7471A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
22-Apr-2011	SL-253-SA5A-SB-8.0-9.0	6267479	N	3050B	6010B	III
22-Apr-2011	SL-253-SA5A-SB-8.0-9.0	6267479	N	3050B	6020	III
22-Apr-2011	SL-253-SA5A-SB-8.0-9.0	6267479	N	3060A	7199	III
22-Apr-2011	SL-253-SA5A-SB-8.0-9.0	6267479	N	3550B	8082	III
22-Apr-2011	SL-253-SA5A-SB-8.0-9.0	6267479	N	3550B	8270C	III
22-Apr-2011	SL-253-SA5A-SB-8.0-9.0	6267479	N	3550B	8270C SIM	III
22-Apr-2011	SL-253-SA5A-SB-8.0-9.0	6267479	N	METHOD	300.0	III
22-Apr-2011	SL-253-SA5A-SB-8.0-9.0	6267479	N	METHOD	314.0	III
22-Apr-2011	SL-253-SA5A-SB-8.0-9.0	6267479	N	METHOD	7471A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory:** LL

EDD Filename: PrepDE135_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: DUP16-SA5A-QC-042211 ***Collected:*** 4/22/2011 11:15:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.0		0.89	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-007-SA8N-SB-4.0-5.0 ***Collected:*** 4/22/2011 9:33:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.9		0.93	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-007-SA8N-SB-9.0-10 ***Collected:*** 4/22/2011 9:45:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.1		0.92	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-010-SA8N-SB-4.0-5.0 ***Collected:*** 4/22/2011 11:10:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	8.1		0.94	MDL	1.2	PQL	mg/Kg	J	Q
Nitrate-NO3	1.2	J	0.94	MDL	1.8	PQL	mg/Kg	J	Z

Sample ID: SL-010-SA8N-SB-9.0-10 ***Collected:*** 4/22/2011 11:20:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	8.5		0.95	MDL	1.2	PQL	mg/Kg	J	Q
Nitrate-NO3	1.4	J	0.95	MDL	1.8	PQL	mg/Kg	J	Z

Sample ID: SL-011-SA8N-SB-4.0-5.0 ***Collected:*** 4/22/2011 12:52:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	11.1		0.95	MDL	1.2	PQL	mg/Kg	J	Q
Nitrate-NO3	1.5	J	0.95	MDL	1.8	PQL	mg/Kg	J	Z

Sample ID: SL-011-SA8N-SB-9.0-10.0 ***Collected:*** 4/22/2011 12:12:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	6.4		0.94	MDL	1.2	PQL	mg/Kg	J	Q
Nitrate-NO3	1.1	J	0.94	MDL	1.8	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory:** LL

EDD Filename: PrepDE135_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-064-SA5A-SB-3.0-4.0 *Collected:* 4/22/2011 11:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.3		0.90	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-166-SA5A-SS-0.0-0.5 *Collected:* 4/22/2011 1:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.1		0.82	MDL	1.0	PQL	mg/Kg	J	Q

Sample ID: SL-253-SA5A-SB-4.0-5.0 *Collected:* 4/22/2011 3:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.9		0.92	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-253-SA5A-SB-8.0-9.0 *Collected:* 4/22/2011 4:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.0		0.89	MDL	1.1	PQL	mg/Kg	J	Q

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: DUP16-SA5A-QC-042211 *Collected:* 4/22/2011 11:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	2490		19.9	MDL	55.4	PQL	mg/Kg	J	Q
SODIUM	102	J	41.3	MDL	111	PQL	mg/Kg	J	Z
TIN	3.45	J	1.11	MDL	11.1	PQL	mg/Kg	U	B

Sample ID: SL-007-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 9:33:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	2920		20.3	MDL	56.4	PQL	mg/Kg	J	Q
SODIUM	91.2	J	42.1	MDL	113	PQL	mg/Kg	J	Z
TIN	3.02	J	1.13	MDL	11.3	PQL	mg/Kg	U	B
Zirconium	3.10	J	0.948	MDL	5.64	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory:** LL

EDD Filename: PrepDE135_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-007-SA8N-SB-9.0-10 *Collected:* 4/22/2011 9:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	2760		20.6	MDL	57.2	PQL	mg/Kg	J	Q
TIN	3.15	J	1.14	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	3.35	J	0.960	MDL	5.72	PQL	mg/Kg	J	Z

Sample ID: SL-010-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 11:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	2860		20.5	MDL	56.8	PQL	mg/Kg	J	Q
TIN	3.13	J	1.14	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	2.72	J	0.955	MDL	5.68	PQL	mg/Kg	J	Z

Sample ID: SL-010-SA8N-SB-9.0-10 *Collected:* 4/22/2011 11:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3080		21.1	MDL	58.6	PQL	mg/Kg	J	Q
TIN	3.31	J	1.17	MDL	11.7	PQL	mg/Kg	U	B
Zirconium	3.23	J	0.984	MDL	5.86	PQL	mg/Kg	J	Z

Sample ID: SL-011-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 12:52:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3190		20.9	MDL	58.0	PQL	mg/Kg	J	Q
TIN	3.26	J	1.16	MDL	11.6	PQL	mg/Kg	U	B
Zirconium	2.78	J	0.975	MDL	5.80	PQL	mg/Kg	J	Z

Sample ID: SL-011-SA8N-SB-9.0-10.0 *Collected:* 4/22/2011 12:12:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	2300		21.1	MDL	58.6	PQL	mg/Kg	J	Q
TIN	3.30	J	1.17	MDL	11.7	PQL	mg/Kg	U	B
Zirconium	2.90	J	0.985	MDL	5.86	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: PrepDE135_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-064-SA5A-SB-3.0-4.0 *Collected:* 4/22/2011 11:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	2660		20.0	MDL	55.5	PQL	mg/Kg	J	Q
SODIUM	93.2	J	41.4	MDL	111	PQL	mg/Kg	J	Z
TIN	3.50	J	1.11	MDL	11.1	PQL	mg/Kg	U	B

Sample ID: SL-166-SA5A-SS-0.0-0.5 *Collected:* 4/22/2011 1:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	2010		18.1	MDL	50.4	PQL	mg/Kg	J	Q
SODIUM	62.2	J	37.6	MDL	101	PQL	mg/Kg	J	Z
TIN	2.89	J	1.01	MDL	10.1	PQL	mg/Kg	U	B

Sample ID: SL-253-SA5A-SB-4.0-5.0 *Collected:* 4/22/2011 3:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	2090		20.7	MDL	57.6	PQL	mg/Kg	J	Q
TIN	3.19	J	1.15	MDL	11.5	PQL	mg/Kg	U	B

Sample ID: SL-253-SA5A-SB-8.0-9.0 *Collected:* 4/22/2011 4:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	2080		19.7	MDL	54.8	PQL	mg/Kg	J	Q
TIN	3.29	J	1.10	MDL	11.0	PQL	mg/Kg	U	B

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: DUP16-SA5A-QC-042211 *Collected:* 4/22/2011 11:15:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.170	J	0.0443	MDL	0.443	PQL	mg/Kg	J	Z

Sample ID: DUP16-SA5A-QC-042211 *Collected:* 4/22/2011 11:15:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.575		0.0554	MDL	0.111	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: PrepDE135_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: DUP16-SA5A-QC-042211 *Collected:* 4/22/2011 11:15:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	113		0.120	MDL	0.443	PQL	mg/Kg	J	E, A

Sample ID: DUP16-SA5A-QC-042211 *Collected:* 4/22/2011 11:15:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0664	U	0.0664	MDL	0.221	PQL	mg/Kg	UJ	Q, E
ARSENIC	8.02		0.0886	MDL	0.443	PQL	mg/Kg	J	Q, Q, E
BERYLLIUM	0.952		0.0177	MDL	0.111	PQL	mg/Kg	J	E
CADMIUM	0.112		0.0443	MDL	0.111	PQL	mg/Kg	J	Q, E
CHROMIUM	25.9		0.133	MDL	0.443	PQL	mg/Kg	J	Q, A
COBALT	8.70		0.0221	MDL	0.111	PQL	mg/Kg	J	Q, E, A
COPPER	14.5		0.0731	MDL	0.443	PQL	mg/Kg	J	Q, E, A
LEAD	8.33		0.0115	MDL	0.221	PQL	mg/Kg	J	Q, Q, E
NICKEL	20.2		0.111	MDL	0.443	PQL	mg/Kg	J	Q, E, A
SILVER	0.0405	J	0.0133	MDL	0.111	PQL	mg/Kg	J	Z, Q, E
VANADIUM	46.5		0.0244	MDL	0.111	PQL	mg/Kg	J	Q, Q, A
ZINC	69.4		0.620	MDL	3.32	PQL	mg/Kg	J	E, A

Sample ID: SL-007-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 9:33:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0767	J	0.0452	MDL	0.452	PQL	mg/Kg	J	Z

Sample ID: SL-007-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 9:33:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.385		0.0564	MDL	0.113	PQL	mg/Kg	J	E

Sample ID: SL-007-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 9:33:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	107		0.122	MDL	0.452	PQL	mg/Kg	J	E, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: PrepDE135_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-007-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 9:33:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0677	U	0.0677	MDL	0.226	PQL	mg/Kg	UJ	Q, E
ARSENIC	6.81		0.0903	MDL	0.452	PQL	mg/Kg	J	Q, Q, E
BERYLLIUM	0.800		0.0181	MDL	0.113	PQL	mg/Kg	J	E
CADMIUM	0.210		0.0452	MDL	0.113	PQL	mg/Kg	J	Q, E
CHROMIUM	28.1		0.135	MDL	0.452	PQL	mg/Kg	J	Q, A
COBALT	10.4		0.0226	MDL	0.113	PQL	mg/Kg	J	Q, E, A
COPPER	14.4		0.0745	MDL	0.452	PQL	mg/Kg	J	Q, E, A
LEAD	7.94		0.0117	MDL	0.226	PQL	mg/Kg	J	Q, Q, E
NICKEL	18.4		0.113	MDL	0.452	PQL	mg/Kg	J	Q, E, A
SILVER	0.0333	J	0.0135	MDL	0.113	PQL	mg/Kg	J	Z, Q, E
VANADIUM	51.3		0.0248	MDL	0.113	PQL	mg/Kg	J	Q, Q, A
ZINC	64.4		0.632	MDL	3.39	PQL	mg/Kg	J	E, A

Sample ID: SL-007-SA8N-SB-9.0-10 *Collected:* 4/22/2011 9:45:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0562	J	0.0457	MDL	0.457	PQL	mg/Kg	J	Z

Sample ID: SL-007-SA8N-SB-9.0-10 *Collected:* 4/22/2011 9:45:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.412		0.0572	MDL	0.114	PQL	mg/Kg	J	E

Sample ID: SL-007-SA8N-SB-9.0-10 *Collected:* 4/22/2011 9:45:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	93.2		0.123	MDL	0.457	PQL	mg/Kg	J	E, A

Sample ID: SL-007-SA8N-SB-9.0-10 *Collected:* 4/22/2011 9:45:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0686	U	0.0686	MDL	0.229	PQL	mg/Kg	UJ	Q, E
ARSENIC	6.72		0.0915	MDL	0.457	PQL	mg/Kg	J	Q, Q, E
BERYLLIUM	0.821		0.0183	MDL	0.114	PQL	mg/Kg	J	E
CADMIUM	0.259		0.0457	MDL	0.114	PQL	mg/Kg	J	Q, E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory:** LL

EDD Filename: PrepDE135_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-007-SA8N-SB-9.0-10 ***Collected:*** 4/22/2011 9:45:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	27.4		0.137	MDL	0.457	PQL	mg/Kg	J	Q, A
COBALT	10.4		0.0229	MDL	0.114	PQL	mg/Kg	J	Q, E, A
COPPER	14.4		0.0755	MDL	0.457	PQL	mg/Kg	J	Q, E, A
LEAD	7.84		0.0119	MDL	0.229	PQL	mg/Kg	J	Q, Q, E
NICKEL	21.1		0.114	MDL	0.457	PQL	mg/Kg	J	Q, E, A
SILVER	0.0318	J	0.0137	MDL	0.114	PQL	mg/Kg	J	Z, Q, E
VANADIUM	49.4		0.0252	MDL	0.114	PQL	mg/Kg	J	Q, Q, A
ZINC	61.7		0.640	MDL	3.43	PQL	mg/Kg	J	E, A

Sample ID: SL-010-SA8N-SB-4.0-5.0 ***Collected:*** 4/22/2011 11:10:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0661	J	0.0468	MDL	0.468	PQL	mg/Kg	J	Z

Sample ID: SL-010-SA8N-SB-4.0-5.0 ***Collected:*** 4/22/2011 11:10:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.344		0.0585	MDL	0.117	PQL	mg/Kg	J	E

Sample ID: SL-010-SA8N-SB-4.0-5.0 ***Collected:*** 4/22/2011 11:10:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	113		0.126	MDL	0.468	PQL	mg/Kg	J	E, A

Sample ID: SL-010-SA8N-SB-4.0-5.0 ***Collected:*** 4/22/2011 11:10:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0918	J	0.0703	MDL	0.234	PQL	mg/Kg	J	Z, Q, E
ARSENIC	7.35		0.0937	MDL	0.468	PQL	mg/Kg	J	Q, Q, E
BERYLLIUM	0.879		0.0187	MDL	0.117	PQL	mg/Kg	J	E
CADMIUM	0.196		0.0468	MDL	0.117	PQL	mg/Kg	J	Q, E
CHROMIUM	31.9		0.141	MDL	0.468	PQL	mg/Kg	J	Q, A
COBALT	11.9		0.0234	MDL	0.117	PQL	mg/Kg	J	Q, E, A
COPPER	15.7		0.0773	MDL	0.468	PQL	mg/Kg	J	Q, E, A
LEAD	9.40		0.0122	MDL	0.234	PQL	mg/Kg	J	Q, Q, E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: PrepDE135_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-010-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 11:10:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	20.7		0.117	MDL	0.468	PQL	mg/Kg	J	Q, E, A
SILVER	0.0304	J	0.0141	MDL	0.117	PQL	mg/Kg	J	Z, Q, E
VANADIUM	57.0		0.0258	MDL	0.117	PQL	mg/Kg	J	Q, Q, A
ZINC	65.6		0.656	MDL	3.51	PQL	mg/Kg	J	E, A

Sample ID: SL-010-SA8N-SB-9.0-10 *Collected:* 4/22/2011 11:20:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0669	J	0.0464	MDL	0.464	PQL	mg/Kg	J	Z

Sample ID: SL-010-SA8N-SB-9.0-10 *Collected:* 4/22/2011 11:20:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.346		0.0580	MDL	0.116	PQL	mg/Kg	J	E

Sample ID: SL-010-SA8N-SB-9.0-10 *Collected:* 4/22/2011 11:20:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	146		0.125	MDL	0.464	PQL	mg/Kg	J	E, A

Sample ID: SL-010-SA8N-SB-9.0-10 *Collected:* 4/22/2011 11:20:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0809	J	0.0696	MDL	0.232	PQL	mg/Kg	J	Z, Q, E
ARSENIC	7.63		0.0928	MDL	0.464	PQL	mg/Kg	J	Q, Q, E
BERYLLIUM	0.940		0.0186	MDL	0.116	PQL	mg/Kg	J	E
CADMIUM	0.212		0.0464	MDL	0.116	PQL	mg/Kg	J	Q, E
CHROMIUM	29.8		0.139	MDL	0.464	PQL	mg/Kg	J	Q, A
COBALT	10.9		0.0232	MDL	0.116	PQL	mg/Kg	J	Q, E, A
COPPER	17.4		0.0766	MDL	0.464	PQL	mg/Kg	J	Q, E, A
LEAD	8.42		0.0121	MDL	0.232	PQL	mg/Kg	J	Q, Q, E
NICKEL	23.5		0.116	MDL	0.464	PQL	mg/Kg	J	Q, E, A
SILVER	0.0943	J	0.0139	MDL	0.116	PQL	mg/Kg	J	Z, Q, E
VANADIUM	54.3		0.0255	MDL	0.116	PQL	mg/Kg	J	Q, Q, A
ZINC	76.2		0.650	MDL	3.48	PQL	mg/Kg	J	E, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory:** LL

EDD Filename: PrepDE135_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-011-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 12:52:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0853	J	0.0460	MDL	0.460	PQL	mg/Kg	J	Z

Sample ID: SL-011-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 12:52:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.550		0.0574	MDL	0.115	PQL	mg/Kg	J	E

Sample ID: SL-011-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 12:52:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	169		0.124	MDL	0.460	PQL	mg/Kg	J	E, A

Sample ID: SL-011-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 12:52:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0689	U	0.0689	MDL	0.230	PQL	mg/Kg	UJ	Q, E
ARSENIC	8.90		0.0919	MDL	0.460	PQL	mg/Kg	J	Q, Q, E
BERYLLIUM	1.07		0.0184	MDL	0.115	PQL	mg/Kg	J	E
CADMIUM	0.224		0.0460	MDL	0.115	PQL	mg/Kg	J	Q, E
CHROMIUM	32.8		0.138	MDL	0.460	PQL	mg/Kg	J	Q, A
COBALT	14.7		0.0230	MDL	0.115	PQL	mg/Kg	J	Q, E, A
COPPER	14.5		0.0758	MDL	0.460	PQL	mg/Kg	J	Q, E, A
LEAD	11.1		0.0119	MDL	0.230	PQL	mg/Kg	J	Q, Q, E
NICKEL	25.7		0.115	MDL	0.460	PQL	mg/Kg	J	Q, E, A
SILVER	0.0636	J	0.0138	MDL	0.115	PQL	mg/Kg	J	Z, Q, E
VANADIUM	62.0		0.0253	MDL	0.115	PQL	mg/Kg	J	Q, Q, A
ZINC	74.6		0.643	MDL	3.45	PQL	mg/Kg	J	E, A

Sample ID: SL-011-SA8N-SB-9.0-10.0 *Collected:* 4/22/2011 12:12:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0713	J	0.0469	MDL	0.469	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory:** LL

EDD Filename: PrepDE135_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-011-SA8N-SB-9.0-10.0 *Collected:* 4/22/2011 12:12:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.352		0.0586	MDL	0.117	PQL	mg/Kg	J	E

Sample ID: SL-011-SA8N-SB-9.0-10.0 *Collected:* 4/22/2011 12:12:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	125		0.127	MDL	0.469	PQL	mg/Kg	J	E, A

Sample ID: SL-011-SA8N-SB-9.0-10.0 *Collected:* 4/22/2011 12:12:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0703	U	0.0703	MDL	0.234	PQL	mg/Kg	UJ	Q, E
ARSENIC	8.06		0.0938	MDL	0.469	PQL	mg/Kg	J	Q, Q, E
BERYLLIUM	0.964		0.0188	MDL	0.117	PQL	mg/Kg	J	E
CADMIUM	0.152		0.0469	MDL	0.117	PQL	mg/Kg	J	Q, E
CHROMIUM	32.3		0.141	MDL	0.469	PQL	mg/Kg	J	Q, A
COBALT	13.0		0.0234	MDL	0.117	PQL	mg/Kg	J	Q, E, A
COPPER	15.9		0.0774	MDL	0.469	PQL	mg/Kg	J	Q, E, A
LEAD	9.97		0.0122	MDL	0.234	PQL	mg/Kg	J	Q, Q, E
NICKEL	24.9		0.117	MDL	0.469	PQL	mg/Kg	J	Q, E, A
SILVER	0.0551	J	0.0141	MDL	0.117	PQL	mg/Kg	J	Z, Q, E
VANADIUM	56.8		0.0258	MDL	0.117	PQL	mg/Kg	J	Q, Q, A
ZINC	69.2		0.657	MDL	3.52	PQL	mg/Kg	J	E, A

Sample ID: SL-064-SA5A-SB-3.0-4.0 *Collected:* 4/22/2011 11:10:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.134	J	0.0440	MDL	0.440	PQL	mg/Kg	J	Z

Sample ID: SL-064-SA5A-SB-3.0-4.0 *Collected:* 4/22/2011 11:10:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.532		0.0550	MDL	0.110	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory:** LL

EDD Filename: PrepDE135_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-064-SA5A-SB-3.0-4.0 *Collected:* 4/22/2011 11:10:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	102		0.119	MDL	0.440	PQL	mg/Kg	J	E, A

Sample ID: SL-064-SA5A-SB-3.0-4.0 *Collected:* 4/22/2011 11:10:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0659	U	0.0659	MDL	0.220	PQL	mg/Kg	UJ	Q, E
ARSENIC	7.42		0.0879	MDL	0.440	PQL	mg/Kg	J	Q, Q, E
BERYLLIUM	0.865		0.0176	MDL	0.110	PQL	mg/Kg	J	E
CADMIUM	0.0937	J	0.0440	MDL	0.110	PQL	mg/Kg	J	Z, Q, E
CHROMIUM	23.6		0.132	MDL	0.440	PQL	mg/Kg	J	Q, A
COBALT	8.10		0.0220	MDL	0.110	PQL	mg/Kg	J	Q, E, A
COPPER	11.4		0.0725	MDL	0.440	PQL	mg/Kg	J	Q, E, A
LEAD	7.52		0.0114	MDL	0.220	PQL	mg/Kg	J	Q, Q, E
NICKEL	18.5		0.110	MDL	0.440	PQL	mg/Kg	J	Q, E, A
SILVER	0.0404	J	0.0132	MDL	0.110	PQL	mg/Kg	J	Z, Q, E
VANADIUM	41.7		0.0242	MDL	0.110	PQL	mg/Kg	J	Q, Q, A
ZINC	63.8		0.615	MDL	3.30	PQL	mg/Kg	J	E, A

Sample ID: SL-166-SA5A-SS-0.0-0.5 *Collected:* 4/22/2011 1:45:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0912	J	0.0403	MDL	0.403	PQL	mg/Kg	J	Z

Sample ID: SL-166-SA5A-SS-0.0-0.5 *Collected:* 4/22/2011 1:45:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.568		0.0504	MDL	0.101	PQL	mg/Kg	J	E

Sample ID: SL-166-SA5A-SS-0.0-0.5 *Collected:* 4/22/2011 1:45:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	71.3		0.109	MDL	0.403	PQL	mg/Kg	J	E, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: PrepDE135_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-166-SA5A-SS-0.0-0.5 *Collected:* 4/22/2011 1:45:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0667	J	0.0605	MDL	0.202	PQL	mg/Kg	J	Z, Q, E
ARSENIC	5.01		0.0806	MDL	0.403	PQL	mg/Kg	J	Q, Q, E
BERYLLIUM	0.696		0.0161	MDL	0.101	PQL	mg/Kg	J	E
CADMIUM	0.167		0.0403	MDL	0.101	PQL	mg/Kg	J	Q, E
CHROMIUM	14.0		0.121	MDL	0.403	PQL	mg/Kg	J	Q, A
COBALT	7.80		0.0202	MDL	0.101	PQL	mg/Kg	J	Q, E, A
COPPER	6.54		0.0665	MDL	0.403	PQL	mg/Kg	J	Q, E, A
LEAD	5.86		0.0105	MDL	0.202	PQL	mg/Kg	J	Q, Q, E
NICKEL	10.4		0.101	MDL	0.403	PQL	mg/Kg	J	Q, E, A
SILVER	0.191		0.0121	MDL	0.101	PQL	mg/Kg	J	Q, E
VANADIUM	29.5		0.0222	MDL	0.101	PQL	mg/Kg	J	Q, Q, A
ZINC	67.6		0.564	MDL	3.02	PQL	mg/Kg	J	E, A

Sample ID: SL-253-SA5A-SB-4.0-5.0 *Collected:* 4/22/2011 3:30:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0748	J	0.0456	MDL	0.456	PQL	mg/Kg	J	Z

Sample ID: SL-253-SA5A-SB-4.0-5.0 *Collected:* 4/22/2011 3:30:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.783		0.0570	MDL	0.114	PQL	mg/Kg	J	E

Sample ID: SL-253-SA5A-SB-4.0-5.0 *Collected:* 4/22/2011 3:30:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	139		0.123	MDL	0.456	PQL	mg/Kg	J	E, A

Sample ID: SL-253-SA5A-SB-4.0-5.0 *Collected:* 4/22/2011 3:30:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0684	U	0.0684	MDL	0.228	PQL	mg/Kg	UJ	Q, E
ARSENIC	6.07		0.0913	MDL	0.456	PQL	mg/Kg	J	Q, Q, E
BERYLLIUM	1.04		0.0183	MDL	0.114	PQL	mg/Kg	J	E
CADMIUM	0.0854	J	0.0456	MDL	0.114	PQL	mg/Kg	J	Z, Q, E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: PrepDE135_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: **SL-253-SA5A-SB-4.0-5.0** ***Collected:*** **4/22/2011 3:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	24.8		0.137	MDL	0.456	PQL	mg/Kg	J	Q, A
COBALT	8.59		0.0228	MDL	0.114	PQL	mg/Kg	J	Q, E, A
COPPER	10.3		0.0753	MDL	0.456	PQL	mg/Kg	J	Q, E, A
LEAD	7.08		0.0119	MDL	0.228	PQL	mg/Kg	J	Q, Q, E
NICKEL	20.5		0.114	MDL	0.456	PQL	mg/Kg	J	Q, E, A
SILVER	0.0646	J	0.0137	MDL	0.114	PQL	mg/Kg	J	Z, Q, E
VANADIUM	49.5		0.0251	MDL	0.114	PQL	mg/Kg	J	Q, Q, A
ZINC	60.8		0.639	MDL	3.42	PQL	mg/Kg	J	E, A

Sample ID: **SL-253-SA5A-SB-8.0-9.0** ***Collected:*** **4/22/2011 4:05:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0882	J	0.0443	MDL	0.443	PQL	mg/Kg	J	Z

Sample ID: **SL-253-SA5A-SB-8.0-9.0** ***Collected:*** **4/22/2011 4:05:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.480		0.0554	MDL	0.111	PQL	mg/Kg	J	E

Sample ID: **SL-253-SA5A-SB-8.0-9.0** ***Collected:*** **4/22/2011 4:05:00** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	105		0.120	MDL	0.443	PQL	mg/Kg	J	E, A

Sample ID: **SL-253-SA5A-SB-8.0-9.0** ***Collected:*** **4/22/2011 4:05:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0664	U	0.0664	MDL	0.221	PQL	mg/Kg	UJ	Q, E
ARSENIC	5.95		0.0886	MDL	0.443	PQL	mg/Kg	J	Q, Q, E
BERYLLIUM	0.775		0.0177	MDL	0.111	PQL	mg/Kg	J	E
CADMIUM	0.101	J	0.0443	MDL	0.111	PQL	mg/Kg	J	Z, Q, E
CHROMIUM	26.4		0.133	MDL	0.443	PQL	mg/Kg	J	Q, A
COBALT	8.45		0.0221	MDL	0.111	PQL	mg/Kg	J	Q, E, A
COPPER	11.0		0.0731	MDL	0.443	PQL	mg/Kg	J	Q, E, A
LEAD	6.76		0.0115	MDL	0.221	PQL	mg/Kg	J	Q, Q, E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: PrepDE135_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-253-SA5A-SB-8.0-9.0 *Collected:* 4/22/2011 4:05:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	15.1		0.111	MDL	0.443	PQL	mg/Kg	J	Q, E, A
SILVER	0.0423	J	0.0133	MDL	0.111	PQL	mg/Kg	J	Z, Q, E
VANADIUM	47.6		0.0244	MDL	0.111	PQL	mg/Kg	J	Q, Q, A
ZINC	60.6		0.620	MDL	3.32	PQL	mg/Kg	J	E, A

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: DUP16-SA5A-QC-042211 *Collected:* 4/22/2011 11:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.29	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z, FD

Sample ID: SL-007-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 9:33:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.47	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-064-SA5A-SB-3.0-4.0 *Collected:* 4/22/2011 11:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.22	U	0.22	MDL	1.1	PQL	mg/Kg	UJ	FD

Sample ID: SL-253-SA5A-SB-4.0-5.0 *Collected:* 4/22/2011 3:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.40	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-253-SA5A-SB-8.0-9.0 *Collected:* 4/22/2011 4:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.26	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: PrepDE135_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: DUP16-SA5A-QC-042211 *Collected:* 4/22/2011 11:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0093	J	0.0032	MDL	0.110	PQL	mg/Kg	UJ	B, FD

Sample ID: SL-007-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 9:33:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0224	J	0.0031	MDL	0.108	PQL	mg/Kg	U	B

Sample ID: SL-007-SA8N-SB-9.0-10 *Collected:* 4/22/2011 9:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0327	J	0.0032	MDL	0.113	PQL	mg/Kg	U	B

Sample ID: SL-010-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 11:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0174	J	0.0032	MDL	0.111	PQL	mg/Kg	U	B

Sample ID: SL-010-SA8N-SB-9.0-10 *Collected:* 4/22/2011 11:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0225	J	0.0032	MDL	0.112	PQL	mg/Kg	U	B

Sample ID: SL-011-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 12:52:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0140	J	0.0032	MDL	0.112	PQL	mg/Kg	U	B

Sample ID: SL-011-SA8N-SB-9.0-10.0 *Collected:* 4/22/2011 12:12:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0216	J	0.0032	MDL	0.113	PQL	mg/Kg	U	B

Sample ID: SL-064-SA5A-SB-3.0-4.0 *Collected:* 4/22/2011 11:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0261	J	0.0031	MDL	0.107	PQL	mg/Kg	UJ	B, FD

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: PrepDE135_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: SL-166-SA5A-SS-0.0-0.5 *Collected:* 4/22/2011 1:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0823	J	0.0029	MDL	0.101	PQL	mg/Kg	J	Z

Sample ID: SL-253-SA5A-SB-4.0-5.0 *Collected:* 4/22/2011 3:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0124	J	0.0032	MDL	0.113	PQL	mg/Kg	U	B

Sample ID: SL-253-SA5A-SB-8.0-9.0 *Collected:* 4/22/2011 4:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0087	J	0.0031	MDL	0.109	PQL	mg/Kg	U	B

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-010-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 11:10:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.86	J	0.47	MDL	1.4	PQL	mg/Kg	J	Z

Sample ID: SL-011-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 12:52:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.86	J	0.47	MDL	1.4	PQL	mg/Kg	J	Z

Sample ID: SL-011-SA8N-SB-9.0-10.0 *Collected:* 4/22/2011 12:12:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.53	J	0.47	MDL	1.4	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: PrepDE135_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-064-SA5A-SB-3.0-4.0 *Collected:* 4/22/2011 11:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZIDINE	1300	U	1300	MDL	3700	PQL	ug/Kg	UJ	Q

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: DUP16-SA5A-QC-042211 *Collected:* 4/22/2011 11:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Diethylphthalate	7.0	J	6.7	MDL	20	PQL	ug/Kg	J	Z, FD
Di-n-butylphthalate	14	J	6.7	MDL	20	PQL	ug/Kg	J	Z, FD
FLUORANTHENE	0.97	J	0.74	MDL	1.9	PQL	ug/Kg	J	Z, FD

Sample ID: SL-011-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 12:52:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	9.1	J	7.1	MDL	21	PQL	ug/Kg	J	Z

Sample ID: SL-064-SA5A-SB-3.0-4.0 *Collected:* 4/22/2011 11:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Diethylphthalate	6.6	U	6.6	MDL	20	PQL	ug/Kg	UJ	FD
Di-n-butylphthalate	6.6	U	6.6	MDL	20	PQL	ug/Kg	UJ	FD
FLUORANTHENE	0.74	U	0.74	MDL	1.8	PQL	ug/Kg	UJ	FD

Sample ID: SL-253-SA5A-SB-4.0-5.0 *Collected:* 4/22/2011 3:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	0.48	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z
FLUORANTHENE	1.3	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
PHENANTHRENE	1.0	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
PYRENE	0.80	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory:** LL

EDD Filename: PrepDE135_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: DUP16-SA5A-QC-042211 *Collected:* 4/22/2011 11:15:00 *Analysis Type:* RES *Dilution:* 0.89

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	0.67	J	0.24	MDL	4.0	PQL	ug/Kg	U	B

Sample ID: SL-007-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 9:33:00 *Analysis Type:* RES *Dilution:* 0.78

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	0.58	J	0.22	MDL	3.6	PQL	ug/Kg	U	B

Sample ID: SL-010-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 11:10:00 *Analysis Type:* RES *Dilution:* 0.87

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	0.52	J	0.25	MDL	4.1	PQL	ug/Kg	U	B

Sample ID: SL-010-SA8N-SB-9.0-10 *Collected:* 4/22/2011 11:20:00 *Analysis Type:* RES *Dilution:* 0.83

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	0.43	J	0.24	MDL	3.9	PQL	ug/Kg	U	B

Sample ID: SL-011-SA8N-SB-4.0-5.0 *Collected:* 4/22/2011 12:52:00 *Analysis Type:* RES *Dilution:* 0.86

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	0.51	J	0.24	MDL	4.1	PQL	ug/Kg	U	B

Sample ID: SL-011-SA8N-SB-9.0-10.0 *Collected:* 4/22/2011 12:12:00 *Analysis Type:* RES *Dilution:* 0.89

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	0.46	J	0.25	MDL	4.2	PQL	ug/Kg	U	B

Sample ID: SL-064-SA5A-SB-3.0-4.0 *Collected:* 4/22/2011 11:10:00 *Analysis Type:* RES *Dilution:* 0.83

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	0.45	J	0.22	MDL	3.7	PQL	ug/Kg	U	B

Sample ID: SL-253-SA5A-SB-4.0-5.0 *Collected:* 4/22/2011 3:30:00 *Analysis Type:* RES *Dilution:* 0.92

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	0.41	J	0.26	MDL	4.3	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: PrepDE135_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category:	VOA		
Method:	8260B	*Matrix:*	SO

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: PrepDE135_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: PrepDE135_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
Q	Matrix Spike Upper Rejection

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: PrepDE135_v1 **eQAPP Name: CDM_SSFL_110509**

R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE135

Method Blank Outlier Report

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: DE135_v1. **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11908AB220116	5/5/2011 1:16:00 AM	ALUMINUM IRON PHOSPHORUS STRONTIUM TIN	5.87 mg/Kg 5.63 mg/Kg 1.51 mg/Kg 0.195 mg/Kg 1.76 mg/Kg	DUP16-SA5A-QC-042211 SL-007-SA8N-SB-4.0-5.0 SL-007-SA8N-SB-9.0-10 SL-010-SA8N-SB-4.0-5.0 SL-010-SA8N-SB-9.0-10 SL-011-SA8N-SB-4.0-5.0 SL-011-SA8N-SB-9.0-10.0 SL-064-SA5A-SB-3.0-4.0 SL-166-SA5A-SS-0.0-0.5 SL-253-SA5A-SB-4.0-5.0 SL-253-SA5A-SB-8.0-9.0
P11908AB220919	5/5/2011 9:19:00 AM	CALCIUM	132 mg/Kg	DUP16-SA5A-QC-042211 SL-007-SA8N-SB-4.0-5.0 SL-007-SA8N-SB-9.0-10 SL-010-SA8N-SB-4.0-5.0 SL-010-SA8N-SB-9.0-10 SL-011-SA8N-SB-4.0-5.0 SL-011-SA8N-SB-9.0-10.0 SL-064-SA5A-SB-3.0-4.0 SL-166-SA5A-SS-0.0-0.5 SL-253-SA5A-SB-4.0-5.0 SL-253-SA5A-SB-8.0-9.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP16-SA5A-QC-042211(RES)	TIN	3.45 mg/Kg	3.45U mg/Kg
SL-007-SA8N-SB-4.0-5.0(RES)	TIN	3.02 mg/Kg	3.02U mg/Kg
SL-007-SA8N-SB-9.0-10(RES)	TIN	3.15 mg/Kg	3.15U mg/Kg
SL-010-SA8N-SB-4.0-5.0(RES)	TIN	3.13 mg/Kg	3.13U mg/Kg
SL-010-SA8N-SB-9.0-10(RES)	TIN	3.31 mg/Kg	3.31U mg/Kg
SL-011-SA8N-SB-4.0-5.0(RES)	TIN	3.26 mg/Kg	3.26U mg/Kg
SL-011-SA8N-SB-9.0-10.0(RES)	TIN	3.30 mg/Kg	3.30U mg/Kg
SL-064-SA5A-SB-3.0-4.0(RES)	TIN	3.50 mg/Kg	3.50U mg/Kg
SL-166-SA5A-SS-0.0-0.5(RES)	TIN	2.89 mg/Kg	2.89U mg/Kg
SL-253-SA5A-SB-4.0-5.0(RES)	TIN	3.19 mg/Kg	3.19U mg/Kg
SL-253-SA5A-SB-8.0-9.0(RES)	TIN	3.29 mg/Kg	3.29U mg/Kg

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11926AB221028A	5/3/2011 10:28:00 AM	COPPER	0.0910 mg/Kg	DUP16-SA5A-QC-042211 SL-007-SA8N-SB-4.0-5.0 SL-007-SA8N-SB-9.0-10 SL-010-SA8N-SB-4.0-5.0 SL-010-SA8N-SB-9.0-10 SL-011-SA8N-SB-4.0-5.0 SL-011-SA8N-SB-9.0-10.0 SL-064-SA5A-SB-3.0-4.0 SL-166-SA5A-SS-0.0-0.5 SL-253-SA5A-SB-4.0-5.0 SL-253-SA5A-SB-8.0-9.0

Method Blank Outlier Report

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: DE135_v1. **eQAPP Name: CDM_SSFL_110509**

Method: **7471A**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11911AB220440	5/3/2011 4:40:00 AM	MERCURY	0.0140 mg/Kg	DUP16-SA5A-QC-042211 SL-007-SA8N-SB-4.0-5.0 SL-007-SA8N-SB-9.0-10 SL-010-SA8N-SB-4.0-5.0 SL-010-SA8N-SB-9.0-10 SL-011-SA8N-SB-4.0-5.0 SL-011-SA8N-SB-9.0-10.0 SL-064-SA5A-SB-3.0-4.0 SL-166-SA5A-SS-0.0-0.5 SL-253-SA5A-SB-4.0-5.0 SL-253-SA5A-SB-8.0-9.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP16-SA5A-QC-042211(RES)	MERCURY	0.0093 mg/Kg	0.0093U mg/Kg
SL-007-SA8N-SB-4.0-5.0(RES)	MERCURY	0.0224 mg/Kg	0.0224U mg/Kg
SL-007-SA8N-SB-9.0-10(RES)	MERCURY	0.0327 mg/Kg	0.0327U mg/Kg
SL-010-SA8N-SB-4.0-5.0(RES)	MERCURY	0.0174 mg/Kg	0.0174U mg/Kg
SL-010-SA8N-SB-9.0-10(RES)	MERCURY	0.0225 mg/Kg	0.0225U mg/Kg
SL-011-SA8N-SB-4.0-5.0(RES)	MERCURY	0.0140 mg/Kg	0.0140U mg/Kg
SL-011-SA8N-SB-9.0-10.0(RES)	MERCURY	0.0216 mg/Kg	0.0216U mg/Kg
SL-064-SA5A-SB-3.0-4.0(RES)	MERCURY	0.0261 mg/Kg	0.0261U mg/Kg
SL-253-SA5A-SB-4.0-5.0(RES)	MERCURY	0.0124 mg/Kg	0.0124U mg/Kg
SL-253-SA5A-SB-8.0-9.0(RES)	MERCURY	0.0087 mg/Kg	0.0087U mg/Kg

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB38B210138A	4/27/2011 1:38:00 AM	METHYLENE CHLORIDE TOLUENE	0.46 ug/Kg 0.08 ug/Kg	DUP16-SA5A-QC-042211 SL-007-SA8N-SB-4.0-5.0 SL-010-SA8N-SB-4.0-5.0 SL-010-SA8N-SB-9.0-10 SL-011-SA8N-SB-4.0-5.0 SL-011-SA8N-SB-9.0-10.0 SL-064-SA5A-SB-3.0-4.0 SL-253-SA5A-SB-4.0-5.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP16-SA5A-QC-042211(RES)	METHYLENE CHLORIDE	0.67 ug/Kg	4.0U ug/Kg
SL-007-SA8N-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	0.58 ug/Kg	3.6U ug/Kg
SL-010-SA8N-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	0.52 ug/Kg	4.1U ug/Kg
SL-010-SA8N-SB-9.0-10(RES)	METHYLENE CHLORIDE	0.43 ug/Kg	3.9U ug/Kg
SL-011-SA8N-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	0.51 ug/Kg	4.1U ug/Kg
SL-011-SA8N-SB-9.0-10.0(RES)	METHYLENE CHLORIDE	0.46 ug/Kg	4.2U ug/Kg
SL-064-SA5A-SB-3.0-4.0(RES)	METHYLENE CHLORIDE	0.45 ug/Kg	3.7U ug/Kg
SL-253-SA5A-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	0.41 ug/Kg	4.3U ug/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: DE135_v1. **eQAPP Name: CDM_SSFL_110509**

Method: **8270C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKLD12B260920	5/3/2011 9:20:00 AM	BIS(2-ETHYLHEXYL)PHTHALATE	20 ug/Kg	DUP16-SA5A-QC-042211 SL-007-SA8N-SB-4.0-5.0 SL-007-SA8N-SB-9.0-10 SL-010-SA8N-SB-4.0-5.0 SL-010-SA8N-SB-9.0-10 SL-011-SA8N-SB-4.0-5.0 SL-011-SA8N-SB-9.0-10.0 SL-064-SA5A-SB-3.0-4.0 SL-166-SA5A-SS-0.0-0.5 SL-253-SA5A-SB-4.0-5.0 SL-253-SA5A-SB-8.0-9.0

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE135 Laboratory: LL

EDD Filename: DE135_v1. eQAPP Name: CDM_SSFL_110509

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-007-SA8N-SB-9.0-10MSD (SL-007-SA8N-SB-9.0-10)	DIETHYLENE GLYCOL ETHYLENE GLYCOL Propylene glycol	- - -	115 116 113	59.00-109.00 63.00-107.00 63.00-107.00	- - -	DIETHYLENE GLYCOL ETHYLENE GLYCOL Propylene glycol	J (all detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-064-SA5A-SB-3.0-4.0MS SL-064-SA5A-SB-3.0-4.0MSD (DUP16-SA5A-QC-042211 SL-007-SA8N-SB-4.0-5.0 SL-007-SA8N-SB-9.0-10 SL-010-SA8N-SB-4.0-5.0 SL-010-SA8N-SB-9.0-10 SL-011-SA8N-SB-4.0-5.0 SL-011-SA8N-SB-9.0-10.0 SL-064-SA5A-SB-3.0-4.0 SL-166-SA5A-SS-0.0-0.5 SL-253-SA5A-SB-4.0-5.0 SL-253-SA5A-SB-8.0-9.0)	ANTIMONY	27	36	75.00-125.00	28 (20.00)	ANTIMONY	J(all detects) UJ(all non-detects) Post Spike = 104%
SL-064-SA5A-SB-3.0-4.0MS SL-064-SA5A-SB-3.0-4.0MSD (DUP16-SA5A-QC-042211 SL-007-SA8N-SB-4.0-5.0 SL-007-SA8N-SB-9.0-10 SL-010-SA8N-SB-4.0-5.0 SL-010-SA8N-SB-9.0-10 SL-011-SA8N-SB-4.0-5.0 SL-011-SA8N-SB-9.0-10.0 SL-064-SA5A-SB-3.0-4.0 SL-166-SA5A-SS-0.0-0.5 SL-253-SA5A-SB-4.0-5.0 SL-253-SA5A-SB-8.0-9.0)	ARSENIC BERYLLIUM CADMIUM CHROMIUM COBALT COPPER LEAD NICKEL SILVER VANADIUM ZINC	70 - - 66 - - 68 - - 59 39	184 - 135 - 133 137 148 153 127 153 209	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	25 (20.00) 22 (20.00) 24 (20.00) - 23 (20.00) 24 (20.00) 24 (20.00) 25 (20.00) 21 (20.00) - 24 (20.00)	ARSENIC BERYLLIUM CADMIUM CHROMIUM COBALT COPPER LEAD NICKEL SILVER VANADIUM ZINC	J(all detects) UJ(all non-detects) Zn, No Qual %R, >4x
SL-064-SA5A-SB-3.0-4.0MSD (DUP16-SA5A-QC-042211 SL-007-SA8N-SB-4.0-5.0 SL-007-SA8N-SB-9.0-10 SL-010-SA8N-SB-4.0-5.0 SL-010-SA8N-SB-9.0-10 SL-011-SA8N-SB-4.0-5.0 SL-011-SA8N-SB-9.0-10.0 SL-064-SA5A-SB-3.0-4.0 SL-166-SA5A-SS-0.0-0.5 SL-253-SA5A-SB-4.0-5.0 SL-253-SA5A-SB-8.0-9.0)	MOLYBDENUM	-	-	75.00-125.00	28 (20.00)	MOLYBDENUM	J(all detects) UJ(all non-detects)
SL-064-SA5A-SB-3.0-4.0MS SL-064-SA5A-SB-3.0-4.0MSD (DUP16-SA5A-QC-042211 SL-007-SA8N-SB-4.0-5.0 SL-007-SA8N-SB-9.0-10 SL-010-SA8N-SB-4.0-5.0 SL-010-SA8N-SB-9.0-10 SL-011-SA8N-SB-4.0-5.0 SL-011-SA8N-SB-9.0-10.0 SL-064-SA5A-SB-3.0-4.0 SL-166-SA5A-SS-0.0-0.5 SL-253-SA5A-SB-4.0-5.0 SL-253-SA5A-SB-8.0-9.0)	BARIUM	-1	316	75.00-125.00	29 (20.00)	BARIUM	J(all detects) UJ(all non-detects) No Qual, %R, >4x

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: DE135_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-064-SA5A-SB-3.0-4.0MS	ALUMINUM	2399	2118	75.00-125.00	-	ALUMINUM	J(all detects)
SL-064-SA5A-SB-3.0-4.0MSD	CALCIUM	184	139	75.00-125.00	-	CALCIUM	
(DUP16-SA5A-QC-042211	IRON	2247	1156	75.00-125.00	-	IRON	
SL-007-SA8N-SB-4.0-5.0	MAGNESIUM	360	221	75.00-125.00	-	MAGNESIUM	
SL-007-SA8N-SB-9.0-10	POTASSIUM	-	137	75.00-125.00	-	POTASSIUM	
SL-010-SA8N-SB-4.0-5.0	TITANIUM	237	231	75.00-125.00	-	TITANIUM	
SL-010-SA8N-SB-9.0-10							
SL-011-SA8N-SB-4.0-5.0							Al, Ca, Fe, Mg, Ti, No Qual, >4x
SL-011-SA8N-SB-9.0-10.0							
SL-064-SA5A-SB-3.0-4.0							
SL-166-SA5A-SS-0.0-0.5							
SL-253-SA5A-SB-4.0-5.0							
SL-253-SA5A-SB-8.0-9.0)							
SL-064-SA5A-SB-3.0-4.0MS	MANGANESE	67	-	75.00-125.00	-	MANGANESE	
(DUP16-SA5A-QC-042211							
SL-007-SA8N-SB-4.0-5.0							
SL-007-SA8N-SB-9.0-10							
SL-010-SA8N-SB-4.0-5.0							
SL-010-SA8N-SB-9.0-10							No Qual, >4x
SL-011-SA8N-SB-4.0-5.0							
SL-011-SA8N-SB-9.0-10.0							
SL-064-SA5A-SB-3.0-4.0							
SL-166-SA5A-SS-0.0-0.5							
SL-253-SA5A-SB-4.0-5.0							
SL-253-SA5A-SB-8.0-9.0)							

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-064-SA5A-SB-3.0-4.0MS	BENZIDINE	14	15	35.00-141.00	-	BENZIDINE	J(all detects) UJ(all non-detects)
SL-064-SA5A-SB-3.0-4.0MSD							
(SL-064-SA5A-SB-3.0-4.0)							

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-064-SA5A-SB-3.0-4.0MS	CALCIUM	56	-	75.00-125.00	-	CALCIUM	
(DUP16-SA5A-QC-042211							No Qual, >4x
SL-064-SA5A-SB-3.0-4.0							
SL-253-SA5A-SB-4.0-5.0							
SL-253-SA5A-SB-8.0-9.0)							

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: DE135_v1. **eQAPP Name: CDM_SSFL_110509**

Method: **300.0**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-064-SA5A-SB-3.0-4.0MS (SL-007-SA8N-SB-4.0-5.0 SL-007-SA8N-SB-9.0-10 SL-010-SA8N-SB-4.0-5.0 SL-010-SA8N-SB-9.0-10 SL-011-SA8N-SB-4.0-5.0 SL-011-SA8N-SB-9.0-10.0 SL-064-SA5A-SB-3.0-4.0 SL-166-SA5A-SS-0.0-0.5 SL-253-SA5A-SB-4.0-5.0 SL-253-SA5A-SB-8.0-9.0)	FLUORIDE	47	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)
DUP16-SA5A-QC-042211MS (DUP16-SA5A-QC-042211)	FLUORIDE	49	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: DE135_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-064-SA5A-SB-3.0-4.0DUP (DUP16-SA5A-QC-042211 SL-007-SA8N-SB-4.0-5.0 SL-007-SA8N-SB-9.0-10 SL-010-SA8N-SB-4.0-5.0 SL-010-SA8N-SB-9.0-10 SL-011-SA8N-SB-4.0-5.0 SL-011-SA8N-SB-9.0-10.0 SL-064-SA5A-SB-3.0-4.0 SL-166-SA5A-SS-0.0-0.5 SL-253-SA5A-SB-4.0-5.0 SL-253-SA5A-SB-8.0-9.0)	Zirconium	200	20.00	No Qual, OK by difference

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-064-SA5A-SB-3.0-4.0DUP (DUP16-SA5A-QC-042211 SL-007-SA8N-SB-4.0-5.0 SL-007-SA8N-SB-9.0-10 SL-010-SA8N-SB-4.0-5.0 SL-010-SA8N-SB-9.0-10 SL-011-SA8N-SB-4.0-5.0 SL-011-SA8N-SB-9.0-10.0 SL-064-SA5A-SB-3.0-4.0 SL-166-SA5A-SS-0.0-0.5 SL-253-SA5A-SB-4.0-5.0 SL-253-SA5A-SB-8.0-9.0)	SELENIUM	22	20.00	No Qual, OK by difference

Method: 7199
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-064-SA5A-SB-3.0-4.0DUP (DUP16-SA5A-QC-042211 SL-007-SA8N-SB-4.0-5.0 SL-007-SA8N-SB-9.0-10 SL-010-SA8N-SB-4.0-5.0 SL-010-SA8N-SB-9.0-10 SL-011-SA8N-SB-4.0-5.0 SL-011-SA8N-SB-9.0-10.0 SL-064-SA5A-SB-3.0-4.0 SL-166-SA5A-SS-0.0-0.5 SL-253-SA5A-SB-4.0-5.0 SL-253-SA5A-SB-8.0-9.0)	HEXAVALENT CHROMIUM	200	20.00	No Qual, OK by difference

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: DE135_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 7471A
Matrix: SO

QC Sample ID (Associated Sample ID)	*Analyte*	*Sample RPD*	*eQAPP RPD*	*Flag*
SL-064-SA5A-SB-3.0-4.0DUP (DUP16-SA5A-QC-042211 SL -007-SA8N-SB-4.0-5.0 SL -007-SA8N-SB-9.0-10 SL -010-SA8N-SB-4.0-5.0 SL -010-SA8N-SB-9.0-10 SL -011-SA8N-SB-4.0-5.0 SL -011-SA8N-SB-9.0-10.0 SL -064-SA5A-SB-3.0-4.0 SL -166-SA5A-SS-0.0-0.5 SL -253-SA5A-SB-4.0-5.0 SL -253-SA5A-SB-8.0-9.0)	MERCURY	123	20.00	No Qual, OK by difference

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE135 Laboratory: LL

EDD Filename: DE135_v1. eQAPP Name: CDM_SSFL_110509

Method: 8260B
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS1Y32Q211104A	1,2-DICHLOROETHANE	131	-	70.00-130.00	-	1,2-DICHLOROETHANE	J(all detects)
LCS1Y32Y211125A	2-Chloro-1,1,1-trifluoroethane	132	132	77.00-120.00	-	2-Chloro-1,1,1-trifluoroethane	
LCSY32Q211001A	BROMOMETHANE	121	125	44.00-120.00	-	BROMOMETHANE	
LCSY32Y211043A	CHLOROMETHANE	-	139	60.00-129.00	-	CHLOROMETHANE	
(TB-042211)	DICHLORODIFLUOROMETHAN	123	122	47.00-120.00	-	DICHLORODIFLUOROMETHA	
	VINYL CHLORIDE	-	127	65.00-125.00	-	VINYL CHLORIDE	

Method: 8330A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11184AQ240252A (SL-010-SA8N-SB-4.0-5.0 SL-010-SA8N-SB-9.0-10 SL-011-SA8N-SB-4.0-5.0 SL-011-SA8N-SB-9.0-10.0)	PETN	124	-	80.00-120.00	-	PETN	J (all detects)

Method: 8082
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11233AY240336A (DUP16-SA5A-QC-042211)	Aroclor 5442	-	115	36.00-106.00	-	Aroclor 5432, 5442, and 5460	J(all detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11926AQ221031A (DUP16-SA5A-QC-042211 SL-007-SA8N-SB-4.0-5.0 SL-007-SA8N-SB-9.0-10 SL-010-SA8N-SB-4.0-5.0 SL-010-SA8N-SB-9.0-10 SL-011-SA8N-SB-4.0-5.0 SL-011-SA8N-SB-9.0-10.0 SL-064-SA5A-SB-3.0-4.0 SL-166-SA5A-SS-0.0-0.5 SL-253-SA5A-SB-4.0-5.0 SL-253-SA5A-SB-8.0-9.0)	ANTIMONY	68	-	80.00-120.00	-	ANTIMONY	No Qual, SRM within limits

Field Duplicate RPD Report

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: DE135_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-064-SA5A-SB-3.0-4.0	DUP16-SA5A-QC-042211			
MOISTURE	10.8	10.6	2		No Qualifiers Applied

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-064-SA5A-SB-3.0-4.0	DUP16-SA5A-QC-042211			
FLUORIDE	2.3	3.0	26	50.00	No Qualifiers Applied

Method: 6010B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-064-SA5A-SB-3.0-4.0	DUP16-SA5A-QC-042211			
ALUMINUM	21900	23700	8	50.00	
BORON	8.23	7.87	4	50.00	
CALCIUM	2920	2990	2	50.00	
IRON	24900	26600	7	50.00	
LITHIUM	32.8	36.7	11	50.00	
MAGNESIUM	5460	5980	9	50.00	
MANGANESE	292	296	1	50.00	No Qualifiers Applied
PHOSPHORUS	309	297	4	50.00	
POTASSIUM	2660	2490	7	50.00	
SODIUM	93.2	102	9	50.00	
STRONTIUM	18.3	19.6	7	50.00	
TIN	3.50	3.45	1	50.00	
TITANIUM	1170	1190	2	50.00	

Method: 6020
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-064-SA5A-SB-3.0-4.0	DUP16-SA5A-QC-042211			
ARSENIC	7.42	8.02	8	50.00	
BARIUM	102	113	10	50.00	
BERYLLIUM	0.865	0.952	10	50.00	
CADMIUM	0.0937	0.112	18	50.00	
CHROMIUM	23.6	25.9	9	50.00	
COBALT	8.10	8.70	7	50.00	
COPPER	11.4	14.5	24	50.00	
LEAD	7.52	8.33	10	50.00	No Qualifiers Applied
MOLYBDENUM	0.532	0.575	8	50.00	
NICKEL	18.5	20.2	9	50.00	
SELENIUM	0.134	0.170	24	50.00	
SILVER	0.0404	0.0405	0	50.00	
THALLIUM	0.316	0.353	11	50.00	
VANADIUM	41.7	46.5	11	50.00	
ZINC	63.8	69.4	8	50.00	

Field Duplicate RPD Report

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: PrepDE135_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7199
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-064-SA5A-SB-3.0-4.0	DUP16-SA5A-QC-042211			
HEXAVALENT CHROMIUM	1.1 U	0.29	200	50.00	J(all detects) UJ(all non-detects)

Method: 7471A
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-064-SA5A-SB-3.0-4.0	DUP16-SA5A-QC-042211			
MERCURY	0.0261	0.0093	95	50.00	J(all detects)

Method: 8260B
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-064-SA5A-SB-3.0-4.0	DUP16-SA5A-QC-042211			
METHYLENE CHLORIDE	0.45	0.67	39	50.00	No Qualifiers Applied

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-064-SA5A-SB-3.0-4.0	DUP16-SA5A-QC-042211			
Diethylphthalate	20 U	7.0	200	50.00	J(all detects) UJ(all non-detects)
Di-n-butylphthalate	20 U	14	200	50.00	
FLUORANTHENE	1.8 U	0.97	200	50.00	

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-064-SA5A-SB-3.0-4.0	DUP16-SA5A-QC-042211			
PH	6.86	7.08	3	50.00	No Qualifiers Applied

Method: ASTM D1498
Matrix: SO

Analyte	Concentration (mV)		Sample RPD	eQAPP RPD	Flag
	SL-064-SA5A-SB-3.0-4.0	DUP16-SA5A-QC-042211			
Oxidation Reduction Potential	392	454	15		No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: DE135_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-010-SA8N-SB-4.0-5.0	Nitrate-NO3	J	1.2	1.8	PQL	mg/Kg	J (all detects)
SL-010-SA8N-SB-9.0-10	Nitrate-NO3	J	1.4	1.8	PQL	mg/Kg	J (all detects)
SL-011-SA8N-SB-4.0-5.0	Nitrate-NO3	J	1.5	1.8	PQL	mg/Kg	J (all detects)
SL-011-SA8N-SB-9.0-10.0	Nitrate-NO3	J	1.1	1.8	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP16-SA5A-QC-042211	SODIUM	J	102	111	PQL	mg/Kg	J (all detects)
	TIN	J	3.45	11.1	PQL	mg/Kg	
SL-007-SA8N-SB-4.0-5.0	SODIUM	J	91.2	113	PQL	mg/Kg	J (all detects)
	TIN	J	3.02	11.3	PQL	mg/Kg	
	Zirconium	J	3.10	5.64	PQL	mg/Kg	
SL-007-SA8N-SB-9.0-10	TIN	J	3.15	11.4	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.35	5.72	PQL	mg/Kg	
SL-010-SA8N-SB-4.0-5.0	TIN	J	3.13	11.4	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.72	5.68	PQL	mg/Kg	
SL-010-SA8N-SB-9.0-10	TIN	J	3.31	11.7	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.23	5.86	PQL	mg/Kg	
SL-011-SA8N-SB-4.0-5.0	TIN	J	3.26	11.6	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.78	5.80	PQL	mg/Kg	
SL-011-SA8N-SB-9.0-10.0	TIN	J	3.30	11.7	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.90	5.86	PQL	mg/Kg	
SL-064-SA5A-SB-3.0-4.0	SODIUM	J	93.2	111	PQL	mg/Kg	J (all detects)
	TIN	J	3.50	11.1	PQL	mg/Kg	
SL-166-SA5A-SS-0.0-0.5	SODIUM	J	62.2	101	PQL	mg/Kg	J (all detects)
	TIN	J	2.89	10.1	PQL	mg/Kg	
SL-253-SA5A-SB-4.0-5.0	TIN	J	3.19	11.5	PQL	mg/Kg	J (all detects)
SL-253-SA5A-SB-8.0-9.0	TIN	J	3.29	11.0	PQL	mg/Kg	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP16-SA5A-QC-042211	SELENIUM	J	0.170	0.443	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0405	0.111	PQL	mg/Kg	
SL-007-SA8N-SB-4.0-5.0	SELENIUM	J	0.0767	0.452	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0333	0.113	PQL	mg/Kg	
SL-007-SA8N-SB-9.0-10	SELENIUM	J	0.0562	0.457	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0318	0.114	PQL	mg/Kg	
SL-010-SA8N-SB-4.0-5.0	ANTIMONY	J	0.0918	0.234	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0661	0.468	PQL	mg/Kg	
	SILVER	J	0.0304	0.117	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: DE135_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-010-SA8N-SB-9.0-10	ANTIMONY	J	0.0809	0.232	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0669	0.464	PQL	mg/Kg	
	SILVER	J	0.0943	0.116	PQL	mg/Kg	
SL-011-SA8N-SB-4.0-5.0	SELENIUM	J	0.0853	0.460	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0636	0.115	PQL	mg/Kg	
SL-011-SA8N-SB-9.0-10.0	SELENIUM	J	0.0713	0.469	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0551	0.117	PQL	mg/Kg	
SL-064-SA5A-SB-3.0-4.0	CADMIUM	J	0.0937	0.110	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.134	0.440	PQL	mg/Kg	
	SILVER	J	0.0404	0.110	PQL	mg/Kg	
SL-166-SA5A-SS-0.0-0.5	ANTIMONY	J	0.0667	0.202	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0912	0.403	PQL	mg/Kg	
SL-253-SA5A-SB-4.0-5.0	CADMIUM	J	0.0854	0.114	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0748	0.456	PQL	mg/Kg	
	SILVER	J	0.0646	0.114	PQL	mg/Kg	
SL-253-SA5A-SB-8.0-9.0	CADMIUM	J	0.101	0.111	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0882	0.443	PQL	mg/Kg	
	SILVER	J	0.0423	0.111	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP16-SA5A-QC-042211	HEXAVALENT CHROMIUM	J	0.29	1.1	PQL	mg/Kg	J (all detects)
SL-007-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.47	1.2	PQL	mg/Kg	J (all detects)
SL-253-SA5A-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.40	1.2	PQL	mg/Kg	J (all detects)
SL-253-SA5A-SB-8.0-9.0	HEXAVALENT CHROMIUM	J	0.26	1.1	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP16-SA5A-QC-042211	MERCURY	J	0.0093	0.110	PQL	mg/Kg	J (all detects)
SL-007-SA8N-SB-4.0-5.0	MERCURY	J	0.0224	0.108	PQL	mg/Kg	J (all detects)
SL-007-SA8N-SB-9.0-10	MERCURY	J	0.0327	0.113	PQL	mg/Kg	J (all detects)
SL-010-SA8N-SB-4.0-5.0	MERCURY	J	0.0174	0.111	PQL	mg/Kg	J (all detects)
SL-010-SA8N-SB-9.0-10	MERCURY	J	0.0225	0.112	PQL	mg/Kg	J (all detects)
SL-011-SA8N-SB-4.0-5.0	MERCURY	J	0.0140	0.112	PQL	mg/Kg	J (all detects)
SL-011-SA8N-SB-9.0-10.0	MERCURY	J	0.0216	0.113	PQL	mg/Kg	J (all detects)
SL-064-SA5A-SB-3.0-4.0	MERCURY	J	0.0261	0.107	PQL	mg/Kg	J (all detects)
SL-166-SA5A-SS-0.0-0.5	MERCURY	J	0.0823	0.101	PQL	mg/Kg	J (all detects)
SL-253-SA5A-SB-4.0-5.0	MERCURY	J	0.0124	0.113	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE135 **Laboratory: LL**

EDD Filename: DE135_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-253-SA5A-SB-8.0-9.0	MERCURY	J	0.0087	0.109	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-010-SA8N-SB-4.0-5.0	EFH (C30-C40)	J	0.86	1.4	PQL	mg/Kg	J (all detects)
SL-011-SA8N-SB-4.0-5.0	EFH (C30-C40)	J	0.86	1.4	PQL	mg/Kg	J (all detects)
SL-011-SA8N-SB-9.0-10.0	EFH (C30-C40)	J	0.53	1.4	PQL	mg/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP16-SA5A-QC-042211	METHYLENE CHLORIDE	J	0.67	4.0	PQL	ug/Kg	J (all detects)
SL-007-SA8N-SB-4.0-5.0	METHYLENE CHLORIDE	J	0.58	3.6	PQL	ug/Kg	J (all detects)
SL-010-SA8N-SB-4.0-5.0	METHYLENE CHLORIDE	J	0.52	4.1	PQL	ug/Kg	J (all detects)
SL-010-SA8N-SB-9.0-10	METHYLENE CHLORIDE	J	0.43	3.9	PQL	ug/Kg	J (all detects)
SL-011-SA8N-SB-4.0-5.0	METHYLENE CHLORIDE	J	0.51	4.1	PQL	ug/Kg	J (all detects)
SL-011-SA8N-SB-9.0-10.0	METHYLENE CHLORIDE	J	0.46	4.2	PQL	ug/Kg	J (all detects)
SL-064-SA5A-SB-3.0-4.0	METHYLENE CHLORIDE	J	0.45	3.7	PQL	ug/Kg	J (all detects)
SL-253-SA5A-SB-4.0-5.0	METHYLENE CHLORIDE	J	0.41	4.3	PQL	ug/Kg	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP16-SA5A-QC-042211	Diethylphthalate	J	7.0	20	PQL	ug/Kg	J (all detects)
	Di-n-butylphthalate	J	14	20	PQL	ug/Kg	
	FLUORANTHENE	J	0.97	1.9	PQL	ug/Kg	
SL-011-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	9.1	21	PQL	ug/Kg	J (all detects)
SL-253-SA5A-SB-4.0-5.0	CHRYSENE	J	0.48	1.9	PQL	ug/Kg	J (all detects)
	FLUORANTHENE	J	1.3	1.9	PQL	ug/Kg	
	PHENANTHRENE	J	1.0	1.9	PQL	ug/Kg	
	PYRENE	J	0.80	1.9	PQL	ug/Kg	

LDC #: 26078E4 **VALIDATION COMPLETENESS WORKSHEET** Date: 8-29-11

SDG #: DE135 ADR Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6010B/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates:
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	No ICB/CCB quals
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	SW	MS ID
VII.	Duplicate Sample Analysis	N	DUP
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	—	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: 5

1	SL-007-SA8N-SB-4.0-5.0	11	DUP16-SA5A-QC-042211	21		31	
2	SL-007-SA8N-SB-9.0-10.0	12	SL-064-SA5A-SB-3.0-4.0MS	22		32	
3	SL-010-SA8N-SB-4.0-5.0	13	SL-064-SA5A-SB-3.0-4.0MSD	23		33	
4	SL-010-SA8N-SB-9.0-10.0	14	SL-064-SA5A-SB-3.0-4.0DUP	24		34	
5	SL-011-SA8N-SB-4.0-5.0	15		25		35	
6	SL-011-SA8N-SB-9.0-10.0	16		26		36	
7	SL-064-SA5A-SB-3.0-4.0	17		27		37	
8	SL-166-SA5A-SB-0.0-0.5	18		28		38	
9	SL-256-SA5A-SB-4.0-5.0	19		29		39	
10	SL-256-SA5A-SB-8.0-9.0	20		30		40	

Notes: _____

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: DE135
Matrix: SOIL Level (low/med): LOW

74X

Background Lab Sample ID: 6267473BKG Matrix Spike Lab Sample ID: 6267474MS Matrix Spike Duplicate Lab Sample ID: 6267475MSD
% Solids for Sample: 89.2
Batch Id(s): P11908A, P11926A, P12508G, P11911A

%R PS 104

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	Control Limit RPD	M
Aluminum		21926.6283		27200.6067		26629.0337		219.8189	221.9953	MG/KG	2399		2118		2			20	P
Antimony	121	0.0659	U	0.3614		0.4795		1.3320	1.3320	MG/KG	27	N	36	N	28	*	75 - 125	20	MS
Arsenic	75	7.4189		8.9620		11.4971		2.2200	2.2200	MG/KG	70	N	184	N	25	*	75 - 125	20	MS
Barium	137	102.0399		101.9402		137.1265		11.0998	11.0998	MG/KG	-1		316		29	*		20	MS
Beryllium	9	0.8648		1.5824		1.9680		0.8880	0.8880	MG/KG	81		124		22	*	75 - 125	20	MS
Boron		8.2305		217.0096		217.7696		219.8189	221.9953	MG/KG	95		94		0		84 - 115	20	P
Cadmium	111	0.0937	B	1.2496		1.5941		1.1100	1.1100	MG/KG	104		135	N	24	*	75 - 125	20	MS
Calcium		2760.4771		3567.4833		3375.5927		439.6377	443.9906	MG/KG	184		139		6			20	P
Chromium	52	23.5646		30.8351		37.0510		11.0998	11.0998	MG/KG	66	N	122		18		75 - 125	20	MS
Cobalt	59	8.0981		64.6006		81.6499		55.4988	55.4988	MG/KG	102		133	N	23	*	75 - 125	20	MS
Copper	63	11.4086		20.9741		26.5950		11.0998	11.0998	MG/KG	86		137	N	24	*	75 - 125	20	MS
Iron		24884.5891		27354.7492		26167.4977		109.9094	110.9976	MG/KG	2247		1156		4			20	P
Lead	208	7.5178		9.7900		12.4340		3.3299	3.3299	MG/KG	68	N	148	N	24	*	75 - 125	20	MS
Lithium		32.7543		145.5454		142.1336		109.9094	110.9976	MG/KG	103		99		2		82 - 114	20	P
Magnesium		5455.8984		6246.1784		5946.7111		219.8189	221.9953	MG/KG	360		221		5			20	P
Manganese		291.5575		328.4127		344.2492		54.9547	55.4988	MG/KG	67		95		5			20	P
Mercury		0.0261	B	0.1637		0.1689		0.1764	0.1840	MG/KG	78		78		3		65 - 135	20	CV
Molybdenum	98	0.5315		10.7024		14.1766		11.0998	11.0998	MG/KG	92		123		28	*	75 - 125	20	MS
Nickel	60	18.4692		27.6384		35.4082		11.0998	11.0998	MG/KG	83		153	N	25	*	75 - 125	20	MS
Phosphorus		308.9431		418.4406		429.9205		109.9094	110.9976	MG/KG	100		109		3		75 - 125	20	P
Potassium		2664.3265		4007.2804		4180.8240		1099.0943	1109.9765	MG/KG	122		137	N	4		75 - 125	20	P
Selenium	78	0.1344	B	2.3576		2.7328		2.2200	2.2200	MG/KG	100		117		15		75 - 125	20	MS
Silver	107	0.0404	B	11.5260		14.1744		11.0998	11.0998	MG/KG	103		127	N	21	*	75 - 125	20	MS
Sodium		93.1725	B	1157.4771		1153.1523		1099.0943	1109.9765	MG/KG	97		95		0		75 - 125	20	P
Strontium		18.3024		129.1535		128.3177		109.9094	110.9976	MG/KG	101		99		1		75 - 115	20	P
Thallium	203	0.3163		0.6893		0.8460		0.4440	0.4440	MG/KG	84		119		20		75 - 125	20	MS
Tin		3.4953	B	374.4944		374.3440		439.6377	443.9906	MG/KG	84		84		0		80 - 110	20	P
Titanium		1169.3402		1429.5898		1425.9679		109.9094	110.9976	MG/KG	237		231		0			20	P
Vanadium	51	41.6996		48.1952		58.6290		11.0998	11.0998	MG/KG	59	N	153	N	20		75 - 125	20	MS
Zinc	66	63.8354		68.1970		87.0444		11.0998	11.0998	MG/KG	39		209		24	*		20	MS
Zirconium		0.9324	U	107.6332		106.9274		109.9094	110.9976	MG/KG	98		96		1		75 - 125	20	P

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: DE135
Matrix: SOIL Level (low/med): LOW

< 5x RL

Background Lab Sample ID: 6267473BKG
% Solids for Duplicate: 89.0
Batch ID(s): P11908A, P11926A, P12508G, P11911A
Concentration Units: MG/KG

Duplicate Lab Sample ID: 6267476DUP
% Solids for Sample: 89.2

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			21926.6283		21156.0989		4		P
Antimony	121		0.0659	U	0.0673	U			MS
Arsenic	75		7.4189		6.7758		9		MS
Barium	137		102.0399		97.7354		4		MS
Beryllium	9		0.8648		0.8143		6		MS
Boron		5.5	8.2305		8.1861		1		P
Cadmium	111		0.0937	B	0.0816	B	14		MS
Calcium			2760.4771		2793.6802		1		P
Chromium	52		23.5646		22.8924		3		MS
Cobalt	59		8.0981		7.8363		3		MS
Copper	63		11.4086		11.0112		4		MS
Iron			24884.5891		25373.5558		2		P
Lead	208		7.5178		7.0381		7		MS
Lithium			32.7543		32.5376		1		P
Magnesium			5455.8984		5497.0127		1		P
Manganese			291.5575		301.1727		3		P
Mercury			0.0261	B	0.0062	B	123		CV
Molybdenum	98	0.1	0.5315		0.5500		3		MS
Nickel	60		18.4692		18.1704		2		MS
Phosphorus			308.9431		326.9366		6		P
Potassium			2664.3265		2727.7686		2		P
Selenium	78		0.1344	B	0.1073	B	22		MS
Silver	107		0.0404	B	0.0399	B	1		MS
Sodium			93.1725	B	94.2078	B	1		P
Strontium			18.3024		18.2867		0		P
Thallium	203	0.1	0.3163		0.2765		13		MS
Tin			3.4953	B	3.3171	B	5		P
Titanium			1169.3402		1161.7856		1		P
Vanadium	51		41.6996		40.7399		2		MS
Zinc	66		63.8354		62.3767		2		MS
Zirconium			0.9324	U	1.3035	B	200		P

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	FLAGS:
AF = Cold Vapor Atomic Fluorescence	* = Duplicate Out of Spec

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: DE135
Matrix: SOIL Level (low/med): LOW

5105

Background Lab Sample ID: 6267473BKG Serial Dilution Lab Sample ID: 6267473L
Batch ID(s): P11908A, P11926A, P12508G
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		197541.3800		201598.7000		2		P
Antimony	121	0.3000	U	1.5000	U			MS
Arsenic	75	33.7500		34.2100		1		MS
Barium	137	464.2000		524.0000		13	E	MS
Beryllium	9	3.9340		4.6900		19		MS
Boron		74.1500		93.6500	B	26		P
Cadmium	111	0.4262	B	1.0085	B	137		MS
Calcium		27082.3500		26133.9000		4		P
Chromium	52	107.2000		130.9500		22	E	MS
Cobalt	59	36.8400		41.7100		13	E	MS
Copper	63	51.9000		65.9500		27	E	MS
Iron		224190.2400		233563.6000		4		P
Lead	208	34.2000		37.6000		10		MS
Lithium		295.0900		316.6000		7		P
Magnesium		49153.2800		49870.0000		1		P
Manganese		2626.7000		2763.7500		5		P
Molybdenum	98	2.4180		3.7990		57		MS
Nickel	60	84.0200		100.3000		19	E	MS
Phosphorus		2783.3300		2904.3000		4		P
Potassium		24003.4500		24326.3500		1		P
Selenium	78	0.6112	B	1.0000	U	100		MS
Silver	107	0.1836	B	0.3057	B	67		MS
Sodium		839.4100	B	1865.0000	U	100		P
Strontium		164.8900		175.7500		7		P
Thallium	203	1.4390		1.7005	B	18		MS
Tin		31.4900	B	50.0000	U	100		P
Titanium		10534.8200		11195.9500		6		P
Vanadium	51	189.7000		236.3000		25	E	MS
Zinc	66	290.4000		346.3500		19	E	MS
Zirconium		8.4000	U	42.0000	U			P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

DE135 3386

FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

SAMPLE DELIVERY GROUP

DE136

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
25-Apr-2011	TB-042511	6268206	TB	5030B	8015M	III
25-Apr-2011	TB-042511	6268206	TB	5030B	8260B	III
25-Apr-2011	TB-042511	6268206	TB	5030B	8260B SIM	III
25-Apr-2011	SL-036-SA8N-SB-4.0-5.0	6268204	N	3050B	6010B	III
25-Apr-2011	SL-036-SA8N-SB-4.0-5.0	6268204	N	3050B	6020	III
25-Apr-2011	SL-036-SA8N-SB-4.0-5.0	6268204	N	3060A	7199	III
25-Apr-2011	SL-036-SA8N-SB-4.0-5.0	6268204	N	3550B	8015M	III
25-Apr-2011	SL-036-SA8N-SB-4.0-5.0	6268204	N	3550B	8082	III
25-Apr-2011	SL-036-SA8N-SB-4.0-5.0	6268204	N	3550B	8270C	III
25-Apr-2011	SL-036-SA8N-SB-4.0-5.0	6268204	N	3550B	8270C SIM	III
25-Apr-2011	SL-036-SA8N-SB-4.0-5.0	6268204	N	5035	8015M	III
25-Apr-2011	SL-036-SA8N-SB-4.0-5.0	6268204	N	5035	8260B	III
25-Apr-2011	SL-036-SA8N-SB-4.0-5.0	6268204	N	5035	8260B SIM	III
25-Apr-2011	SL-036-SA8N-SB-4.0-5.0	6268204	N	METHOD	300.0	III
25-Apr-2011	SL-036-SA8N-SB-4.0-5.0	6268204	N	METHOD	314.0	III
25-Apr-2011	SL-036-SA8N-SB-4.0-5.0	6268204	N	METHOD	7471A	III
25-Apr-2011	SL-036-SA8N-SB-4.0-5.0DUP	P268204D270537A	DUP	METHOD	300.0	III
25-Apr-2011	SL-036-SA8N-SB-4.0-5.0DUP	P268204D271637A	DUP	METHOD	314.0	III
25-Apr-2011	SL-036-SA8N-SB-4.0-5.0MSD	P268204M261211	MSD	3550B	8270C SIM	III
25-Apr-2011	SL-036-SA8N-SB-4.0-5.0MS	P268204R261139	MS	3550B	8270C SIM	III
25-Apr-2011	SL-036-SA8N-SB-4.0-5.0MS	P268204R270552A	MS	METHOD	300.0	III
25-Apr-2011	SL-036-SA8N-SB-4.0-5.0MS	P268204R271659A	MS	METHOD	314.0	III
25-Apr-2011	SL-036-SA8N-SB-9.0-10.0	6268205	N	3050B	6010B	III
25-Apr-2011	SL-036-SA8N-SB-9.0-10.0	6268205	N	3050B	6020	III
25-Apr-2011	SL-036-SA8N-SB-9.0-10.0	6268205	N	3060A	7199	III
25-Apr-2011	SL-036-SA8N-SB-9.0-10.0	6268205	N	3550B	8015M	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
25-Apr-2011	SL-036-SA8N-SB-9.0-10.0	6268205	N	3550B	8082	III
25-Apr-2011	SL-036-SA8N-SB-9.0-10.0	6268205	N	3550B	8270C	III
25-Apr-2011	SL-036-SA8N-SB-9.0-10.0	6268205	N	3550B	8270C SIM	III
25-Apr-2011	SL-036-SA8N-SB-9.0-10.0	6268205	N	5035	8015M	III
25-Apr-2011	SL-036-SA8N-SB-9.0-10.0	6268205	N	METHOD	300.0	III
25-Apr-2011	SL-036-SA8N-SB-9.0-10.0	6268205	N	METHOD	314.0	III
25-Apr-2011	SL-036-SA8N-SB-9.0-10.0	6268205	N	METHOD	7471A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE136 **Laboratory:** LL

EDD Filename: DE136_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-036-SA8N-SB-4.0-5.0 *Collected:* 4/25/2011 11:14:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	4690		21.0	MDL	58.2	PQL	mg/Kg	J	Q
TIN	3.32	J	1.16	MDL	11.6	PQL	mg/Kg	U	B
Zirconium	3.71	J	0.978	MDL	5.82	PQL	mg/Kg	J	Z

Sample ID: SL-036-SA8N-SB-9.0-10.0 *Collected:* 4/25/2011 11:18:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	2500		21.9	MDL	60.9	PQL	mg/Kg	J	Q
TIN	3.59	J	1.22	MDL	12.2	PQL	mg/Kg	U	B
Zirconium	1.60	J	1.02	MDL	6.09	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-036-SA8N-SB-4.0-5.0 *Collected:* 4/25/2011 11:14:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.173	J	0.0452	MDL	0.452	PQL	mg/Kg	J	Z

Sample ID: SL-036-SA8N-SB-4.0-5.0 *Collected:* 4/25/2011 11:14:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.361		0.0566	MDL	0.113	PQL	mg/Kg	J	E

Sample ID: SL-036-SA8N-SB-4.0-5.0 *Collected:* 4/25/2011 11:14:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	181		0.122	MDL	0.452	PQL	mg/Kg	J	A, E

Sample ID: SL-036-SA8N-SB-4.0-5.0 *Collected:* 4/25/2011 11:14:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.114	J	0.0679	MDL	0.226	PQL	mg/Kg	J	Z, Q, E
ARSENIC	7.35		0.0905	MDL	0.452	PQL	mg/Kg	J	Q, Q, E
BERYLLIUM	1.09		0.0181	MDL	0.113	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE136 **Laboratory: LL**

EDD Filename: DE136_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-036-SA8N-SB-4.0-5.0 *Collected:* 4/25/2011 11:14:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.331		0.0452	MDL	0.113	PQL	mg/Kg	J	Q, E
CHROMIUM	37.0		0.136	MDL	0.452	PQL	mg/Kg	J	A, Q
COBALT	14.7		0.0226	MDL	0.113	PQL	mg/Kg	J	A, Q, E
COPPER	20.5		0.0747	MDL	0.452	PQL	mg/Kg	J	A, Q, E
LEAD	11.8		0.0118	MDL	0.226	PQL	mg/Kg	J	Q, Q, E
NICKEL	26.3		0.113	MDL	0.452	PQL	mg/Kg	J	A, Q, E
SILVER	0.0569	J	0.0136	MDL	0.113	PQL	mg/Kg	J	Z, Q, E
VANADIUM	68.6		0.0249	MDL	0.113	PQL	mg/Kg	J	A, Q, Q
ZINC	82.9		0.633	MDL	3.39	PQL	mg/Kg	J	A, E

Sample ID: SL-036-SA8N-SB-9.0-10.0 *Collected:* 4/25/2011 11:18:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.254		0.0497	MDL	0.124	PQL	mg/Kg	J	Q, E

Sample ID: SL-036-SA8N-SB-9.0-10.0 *Collected:* 4/25/2011 11:18:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.101	J	0.0497	MDL	0.497	PQL	mg/Kg	J	Z

Sample ID: SL-036-SA8N-SB-9.0-10.0 *Collected:* 4/25/2011 11:18:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.241		0.0621	MDL	0.124	PQL	mg/Kg	J	E

Sample ID: SL-036-SA8N-SB-9.0-10.0 *Collected:* 4/25/2011 11:18:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	143		0.134	MDL	0.497	PQL	mg/Kg	J	A, E

Sample ID: SL-036-SA8N-SB-9.0-10.0 *Collected:* 4/25/2011 11:18:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0745	U	0.0745	MDL	0.248	PQL	mg/Kg	UJ	Q, E
ARSENIC	9.21		0.0994	MDL	0.497	PQL	mg/Kg	J	Q, Q, E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE136 **Laboratory: LL**

EDD Filename: DE136_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-036-SA8N-SB-9.0-10.0 *Collected:* 4/25/2011 11:18:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.983		0.0199	MDL	0.124	PQL	mg/Kg	J	E
CHROMIUM	38.1		0.149	MDL	0.497	PQL	mg/Kg	J	A, Q
COBALT	12.8		0.0248	MDL	0.124	PQL	mg/Kg	J	A, Q, E
COPPER	21.1		0.0820	MDL	0.497	PQL	mg/Kg	J	A, Q, E
LEAD	11.4		0.0129	MDL	0.248	PQL	mg/Kg	J	Q, Q, E
NICKEL	27.0		0.124	MDL	0.497	PQL	mg/Kg	J	A, Q, E
SILVER	0.0794	J	0.0149	MDL	0.124	PQL	mg/Kg	J	Z, Q, E
VANADIUM	71.9		0.0273	MDL	0.124	PQL	mg/Kg	J	A, Q, Q
ZINC	80.4		0.696	MDL	3.73	PQL	mg/Kg	J	A, E

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: SL-036-SA8N-SB-4.0-5.0 *Collected:* 4/25/2011 11:14:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.38	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-036-SA8N-SB-4.0-5.0 *Collected:* 4/25/2011 11:14:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.86	J	0.47	MDL	1.4	PQL	mg/Kg	J	Z

Sample ID: SL-036-SA8N-SB-9.0-10.0 *Collected:* 4/25/2011 11:18:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.73	J	0.50	MDL	1.5	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE136 **Laboratory: LL**

EDD Filename: DE136_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **SVOA**

Method: **8270C SIM** ***Matrix:*** **SO**

Sample ID: **SL-036-SA8N-SB-4.0-5.0** ***Collected:*** **4/25/2011 11:14:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
NAPHTHALENE	0.81	J	0.78	MDL	1.9	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE136 **Laboratory: LL**

EDD Filename: DE136_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE136 **Laboratory: LL**

EDD Filename: DE136_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
Q	Matrix Spike Upper Rejection

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE136 **Laboratory: LL**

EDD Filename: DE136_v1 **eQAPP Name: CDM_SSFL_110509**

R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE136

Method Blank Outlier Report

Lab Reporting Batch ID: DE136 **Laboratory: LL**

EDD Filename: DE136_v1. **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11908AB220116	5/5/2011 1:16:00 AM	ALUMINUM IRON PHOSPHORUS STRONTIUM TIN	5.87 mg/Kg 5.63 mg/Kg 1.51 mg/Kg 0.195 mg/Kg 1.76 mg/Kg	SL-036-SA8N-SB-4.0-5.0 SL-036-SA8N-SB-9.0-10.0
P11908AB220919	5/5/2011 9:19:00 AM	CALCIUM	132 mg/Kg	SL-036-SA8N-SB-4.0-5.0 SL-036-SA8N-SB-9.0-10.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-036-SA8N-SB-4.0-5.0(RES)	TIN	3.32 mg/Kg	3.32U mg/Kg
SL-036-SA8N-SB-9.0-10.0(RES)	TIN	3.59 mg/Kg	3.59U mg/Kg

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11926AB221028A	5/3/2011 10:28:00 AM	COPPER	0.0910 mg/Kg	SL-036-SA8N-SB-4.0-5.0 SL-036-SA8N-SB-9.0-10.0

Method: **7471A**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11911AB220440	5/3/2011 4:40:00 AM	MERCURY	0.0140 mg/Kg	SL-036-SA8N-SB-4.0-5.0 SL-036-SA8N-SB-9.0-10.0

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB38B210138A	4/27/2011 1:38:00 AM	METHYLENE CHLORIDE TOLUENE	0.46 ug/Kg 0.08 ug/Kg	SL-036-SA8N-SB-4.0-5.0

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE136 **Laboratory: LL**

EDD Filename: DE136_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 8260B
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS1Y32Q211104A	1,2-DICHLOROETHANE	131	-	70.00-130.00	-	1,2-DICHLOROETHANE	J(all detects)
LCS1Y32Y211125A	2-Chloro-1,1,1-trifluoroethane	132	132	77.00-120.00	-	2-Chloro-1,1,1-trifluoroethane	
LCSY32Q211001A	BROMOMETHANE	121	125	44.00-120.00	-	BROMOMETHANE	
LCSY32Y211043A	CHLOROMETHANE	-	139	60.00-129.00	-	CHLOROMETHANE	
(TB-042511)	DICHLORODIFLUOROMETHAN	123	122	47.00-120.00	-	DICHLORODIFLUOROMETHA	
	VINYL CHLORIDE	-	127	65.00-125.00	-	VINYL CHLORIDE	

Method: 8082
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11233AY240336A (SL-036-SA8N-SB-4.0-5.0 SL -036-SA8N-SB-9.0-10.0)	Aroclor 5442	-	115	36.00-106.00	-	Aroclor 5432 Aroclor 5442 Aroclor 5460	J (all detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11926AQ221031A (SL-036-SA8N-SB-4.0-5.0 SL -036-SA8N-SB-9.0-10.0)	ANTIMONY	68	-	80.00-120.00	-	ANTIMONY	No Qual, SRM within limits

Reporting Limit Outliers

Lab Reporting Batch ID: DE136 **Laboratory: LL**

EDD Filename: DE136_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-036-SA8N-SB-4.0-5.0	TIN	J	3.32	11.6	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.71	5.82	PQL	mg/Kg	
SL-036-SA8N-SB-9.0-10.0	TIN	J	3.59	12.2	PQL	mg/Kg	J (all detects)
	Zirconium	J	1.60	6.09	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-036-SA8N-SB-4.0-5.0	ANTIMONY	J	0.114	0.226	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.173	0.452	PQL	mg/Kg	
	SILVER	J	0.0569	0.113	PQL	mg/Kg	
SL-036-SA8N-SB-9.0-10.0	SELENIUM	J	0.101	0.497	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0794	0.124	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-036-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.38	1.2	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-036-SA8N-SB-4.0-5.0	EFH (C30-C40)	J	0.86	1.4	PQL	mg/Kg	J (all detects)
SL-036-SA8N-SB-9.0-10.0	EFH (C30-C40)	J	0.73	1.5	PQL	mg/Kg	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-036-SA8N-SB-4.0-5.0	NAPHTHALENE	J	0.81	1.9	PQL	ug/Kg	J (all detects)

LDC #: 26078F4 **VALIDATION COMPLETENESS WORKSHEET** Date: 8/29-11
SDG #: DE136 ADR Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6010B/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates:
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	No ICB/CCB quals
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	N	MS/D (SD6: DE135)
VII.	Duplicate Sample Analysis	N	Dup
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	(SD6: DE135)
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	—	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: 3

1	SL-036-SA8N-SB-4.0-5.0	11		21		31	
2	SL-036-SA8N-SB-9.0-10.0	12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

SAMPLE DELIVERY GROUP

DE137

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-Apr-2011	TB-042611	6269640	TB	5030B	8015M	III
26-Apr-2011	TB-042611	6269640	TB	5030B	8260B	III
26-Apr-2011	TB-042611	6269640	TB	5030B	8260B SIM	III
26-Apr-2011	SL-027-SA8N-SB-4.0-5.0	6269636	N	3050B	6010B	III
26-Apr-2011	SL-027-SA8N-SB-4.0-5.0	6269636	N	3050B	6020	III
26-Apr-2011	SL-027-SA8N-SB-4.0-5.0	6269636	N	3060A	7199	III
26-Apr-2011	SL-027-SA8N-SB-4.0-5.0	6269636	N	3550B	8015M	III
26-Apr-2011	SL-027-SA8N-SB-4.0-5.0	6269636	N	3550B	8082	III
26-Apr-2011	SL-027-SA8N-SB-4.0-5.0	6269636	N	3550B	8270C	III
26-Apr-2011	SL-027-SA8N-SB-4.0-5.0	6269636	N	3550B	8270C SIM	III
26-Apr-2011	SL-027-SA8N-SB-4.0-5.0	6269636	N	5035	8015M	III
26-Apr-2011	SL-027-SA8N-SB-4.0-5.0	6269636	N	5035	8260B	III
26-Apr-2011	SL-027-SA8N-SB-4.0-5.0	6269636	N	5035	8260B SIM	III
26-Apr-2011	SL-027-SA8N-SB-4.0-5.0	6269636	N	METHOD	300.0	III
26-Apr-2011	SL-027-SA8N-SB-4.0-5.0	6269636	N	METHOD	314.0	III
26-Apr-2011	SL-027-SA8N-SB-4.0-5.0	6269636	N	METHOD	7471A	III
26-Apr-2011	SL-027-SA8N-SB-4.0-5.0MSD	P269636M322106A	MSD	3550B	8015M	III
26-Apr-2011	SL-027-SA8N-SB-4.0-5.0MS	P269636R322041A	MS	3550B	8015M	III
26-Apr-2011	SL-027-SA8N-SB-9.0-10	6269637	N	3050B	6010B	III
26-Apr-2011	SL-027-SA8N-SB-9.0-10	6269637	N	3050B	6020	III
26-Apr-2011	SL-027-SA8N-SB-9.0-10	6269637	N	3060A	7199	III
26-Apr-2011	SL-027-SA8N-SB-9.0-10	6269637	N	3550B	8015M	III
26-Apr-2011	SL-027-SA8N-SB-9.0-10	6269637	N	3550B	8082	III
26-Apr-2011	SL-027-SA8N-SB-9.0-10	6269637	N	3550B	8270C	III
26-Apr-2011	SL-027-SA8N-SB-9.0-10	6269637	N	3550B	8270C SIM	III
26-Apr-2011	SL-027-SA8N-SB-9.0-10	6269637	N	5035	8015M	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-Apr-2011	SL-027-SA8N-SB-9.0-10	6269637	N	METHOD	300.0	III
26-Apr-2011	SL-027-SA8N-SB-9.0-10	6269637	N	METHOD	314.0	III
26-Apr-2011	SL-027-SA8N-SB-9.0-10	6269637	N	METHOD	7471A	III
26-Apr-2011	SL-028-SA8N-SB-4.0-5.0	6269638	N	3050B	6010B	III
26-Apr-2011	SL-028-SA8N-SB-4.0-5.0	6269638	N	3050B	6020	III
26-Apr-2011	SL-028-SA8N-SB-4.0-5.0	6269638	N	3060A	7199	III
26-Apr-2011	SL-028-SA8N-SB-4.0-5.0	6269638	N	3550B	8015M	III
26-Apr-2011	SL-028-SA8N-SB-4.0-5.0	6269638	N	3550B	8082	III
26-Apr-2011	SL-028-SA8N-SB-4.0-5.0	6269638	N	3550B	8270C	III
26-Apr-2011	SL-028-SA8N-SB-4.0-5.0	6269638	N	3550B	8270C SIM	III
26-Apr-2011	SL-028-SA8N-SB-4.0-5.0	6269638	N	5035	8015M	III
26-Apr-2011	SL-028-SA8N-SB-4.0-5.0	6269638	N	5035	8260B	III
26-Apr-2011	SL-028-SA8N-SB-4.0-5.0	6269638	N	5035	8260B SIM	III
26-Apr-2011	SL-028-SA8N-SB-4.0-5.0	6269638	N	METHOD	300.0	III
26-Apr-2011	SL-028-SA8N-SB-4.0-5.0	6269638	N	METHOD	314.0	III
26-Apr-2011	SL-028-SA8N-SB-4.0-5.0	6269638	N	METHOD	7471A	III
26-Apr-2011	SL-028-SA8N-SB-9.0-10.0	6269639	N	3050B	6010B	III
26-Apr-2011	SL-028-SA8N-SB-9.0-10.0	6269639	N	3050B	6020	III
26-Apr-2011	SL-028-SA8N-SB-9.0-10.0	6269639	N	3060A	7199	III
26-Apr-2011	SL-028-SA8N-SB-9.0-10.0	6269639	N	3550B	8015M	III
26-Apr-2011	SL-028-SA8N-SB-9.0-10.0	6269639	N	3550B	8082	III
26-Apr-2011	SL-028-SA8N-SB-9.0-10.0	6269639	N	3550B	8270C	III
26-Apr-2011	SL-028-SA8N-SB-9.0-10.0	6269639	N	3550B	8270C SIM	III
26-Apr-2011	SL-028-SA8N-SB-9.0-10.0	6269639	N	5035	8015M	III
26-Apr-2011	SL-028-SA8N-SB-9.0-10.0	6269639	N	METHOD	300.0	III
26-Apr-2011	SL-028-SA8N-SB-9.0-10.0	6269639	N	METHOD	314.0	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-Apr-2011	SL-028-SA8N-SB-9.0-10.0	6269639	N	METHOD	7471A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE137 **Laboratory: LL**

EDD Filename: PrepDE137_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-027-SA8N-SB-4.0-5.0 *Collected:* 4/26/2011 10:54:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	2500		20.9	MDL	57.9	PQL	mg/Kg	J	Q
TIN	3.25	J	1.16	MDL	11.6	PQL	mg/Kg	U	B
Zirconium	2.01	J	0.973	MDL	5.79	PQL	mg/Kg	J	Z

Sample ID: SL-027-SA8N-SB-9.0-10 *Collected:* 4/26/2011 11:01:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3300		20.2	MDL	56.0	PQL	mg/Kg	J	Q
TIN	3.44	J	1.12	MDL	11.2	PQL	mg/Kg	U	B
Zirconium	2.38	J	0.941	MDL	5.60	PQL	mg/Kg	J	Z

Sample ID: SL-028-SA8N-SB-4.0-5.0 *Collected:* 4/26/2011 12:19:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	2110		20.4	MDL	56.6	PQL	mg/Kg	J	Q
TIN	3.13	J	1.13	MDL	11.3	PQL	mg/Kg	U	B
Zirconium	2.99	J	0.950	MDL	5.66	PQL	mg/Kg	J	Z

Sample ID: SL-028-SA8N-SB-9.0-10.0 *Collected:* 4/26/2011 12:28:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.60	J	0.961	MDL	5.40	PQL	mg/Kg	J	Z
POTASSIUM	1760		19.4	MDL	54.0	PQL	mg/Kg	J	Q
TIN	3.07	J	1.08	MDL	10.8	PQL	mg/Kg	U	B
Zirconium	1.50	J	0.907	MDL	5.40	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-027-SA8N-SB-4.0-5.0 *Collected:* 4/26/2011 10:54:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0733	J	0.0463	MDL	0.463	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE137 **Laboratory: LL**

EDD Filename: PrepDE137_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: SL-027-SA8N-SB-4.0-5.0 ***Collected:*** 4/26/2011 10:54:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.237		0.0579	MDL	0.116	PQL	mg/Kg	J	E

Sample ID: SL-027-SA8N-SB-4.0-5.0 ***Collected:*** 4/26/2011 10:54:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	150		0.125	MDL	0.463	PQL	mg/Kg	J	E, A

Sample ID: SL-027-SA8N-SB-4.0-5.0 ***Collected:*** 4/26/2011 10:54:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0956	J	0.0695	MDL	0.232	PQL	mg/Kg	J	Z, Q, E
ARSENIC	8.51		0.0927	MDL	0.463	PQL	mg/Kg	J	Q, Q, E
BERYLLIUM	1.07		0.0185	MDL	0.116	PQL	mg/Kg	J	E
CADMIUM	0.228		0.0463	MDL	0.116	PQL	mg/Kg	J	Q, E
CHROMIUM	32.5		0.139	MDL	0.463	PQL	mg/Kg	J	Q, A
COBALT	17.7		0.0232	MDL	0.116	PQL	mg/Kg	J	Q, E, A
COPPER	18.9		0.0765	MDL	0.463	PQL	mg/Kg	J	Q, E, A
LEAD	12.5		0.0121	MDL	0.232	PQL	mg/Kg	J	Q, Q, E
NICKEL	24.0		0.116	MDL	0.463	PQL	mg/Kg	J	Q, E, A
SILVER	0.0436	J	0.0139	MDL	0.116	PQL	mg/Kg	J	Z, Q, E
VANADIUM	57.0		0.0255	MDL	0.116	PQL	mg/Kg	J	Q, Q, A
ZINC	73.4		0.649	MDL	3.48	PQL	mg/Kg	J	E, A

Sample ID: SL-027-SA8N-SB-9.0-10 ***Collected:*** 4/26/2011 11:01:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0686	J	0.0453	MDL	0.453	PQL	mg/Kg	J	Z

Sample ID: SL-027-SA8N-SB-9.0-10 ***Collected:*** 4/26/2011 11:01:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.567		0.0566	MDL	0.113	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE137 **Laboratory: LL**

EDD Filename: PrepDE137_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: **SL-027-SA8N-SB-9.0-10** ***Collected:*** **4/26/2011 11:01:00** ***Analysis Type:*** **REA4** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	133		0.122	MDL	0.453	PQL	mg/Kg	J	E, A

Sample ID: **SL-027-SA8N-SB-9.0-10** ***Collected:*** **4/26/2011 11:01:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.211	J	0.0679	MDL	0.226	PQL	mg/Kg	J	Z, Q, E
ARSENIC	8.50		0.0905	MDL	0.453	PQL	mg/Kg	J	Q, Q, E
BERYLLIUM	1.07		0.0181	MDL	0.113	PQL	mg/Kg	J	E
CADMIUM	0.362		0.0453	MDL	0.113	PQL	mg/Kg	J	Q, E
CHROMIUM	30.9		0.136	MDL	0.453	PQL	mg/Kg	J	Q, A
COBALT	10.1		0.0226	MDL	0.113	PQL	mg/Kg	J	Q, E, A
COPPER	17.7		0.0747	MDL	0.453	PQL	mg/Kg	J	Q, E, A
LEAD	9.61		0.0118	MDL	0.226	PQL	mg/Kg	J	Q, Q, E
NICKEL	25.5		0.113	MDL	0.453	PQL	mg/Kg	J	Q, E, A
SILVER	0.0634	J	0.0136	MDL	0.113	PQL	mg/Kg	J	Z, Q, E
VANADIUM	63.8		0.0249	MDL	0.113	PQL	mg/Kg	J	Q, Q, A
ZINC	77.5		0.634	MDL	3.39	PQL	mg/Kg	J	E, A

Sample ID: **SL-028-SA8N-SB-4.0-5.0** ***Collected:*** **4/26/2011 12:19:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0581	J	0.0457	MDL	0.457	PQL	mg/Kg	J	Z

Sample ID: **SL-028-SA8N-SB-4.0-5.0** ***Collected:*** **4/26/2011 12:19:00** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.145		0.0571	MDL	0.114	PQL	mg/Kg	J	E

Sample ID: **SL-028-SA8N-SB-4.0-5.0** ***Collected:*** **4/26/2011 12:19:00** ***Analysis Type:*** **REA4** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	113		0.123	MDL	0.457	PQL	mg/Kg	J	E, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE137 **Laboratory: LL**

EDD Filename: PrepDE137_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: **SL-028-SA8N-SB-4.0-5.0** ***Collected:*** **4/26/2011 12:19:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0855	J	0.0685	MDL	0.228	PQL	mg/Kg	J	Z, Q, E
ARSENIC	6.53		0.0914	MDL	0.457	PQL	mg/Kg	J	Q, Q, E
BERYLLIUM	1.04		0.0183	MDL	0.114	PQL	mg/Kg	J	E
CADMIUM	0.210		0.0457	MDL	0.114	PQL	mg/Kg	J	Q, E
CHROMIUM	34.2		0.137	MDL	0.457	PQL	mg/Kg	J	Q, A
COBALT	8.46		0.0228	MDL	0.114	PQL	mg/Kg	J	Q, E, A
COPPER	16.2		0.0754	MDL	0.457	PQL	mg/Kg	J	Q, E, A
LEAD	8.21		0.0119	MDL	0.228	PQL	mg/Kg	J	Q, Q, E
NICKEL	23.5		0.114	MDL	0.457	PQL	mg/Kg	J	Q, E, A
SILVER	0.0375	J	0.0137	MDL	0.114	PQL	mg/Kg	J	Z, Q, E
VANADIUM	56.4		0.0251	MDL	0.114	PQL	mg/Kg	J	Q, Q, A
ZINC	58.8		0.640	MDL	3.43	PQL	mg/Kg	J	E, A

Sample ID: **SL-028-SA8N-SB-9.0-10.0** ***Collected:*** **4/26/2011 12:28:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0818	J	0.0428	MDL	0.428	PQL	mg/Kg	J	Z

Sample ID: **SL-028-SA8N-SB-9.0-10.0** ***Collected:*** **4/26/2011 12:28:00** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.145		0.0535	MDL	0.107	PQL	mg/Kg	J	E

Sample ID: **SL-028-SA8N-SB-9.0-10.0** ***Collected:*** **4/26/2011 12:28:00** ***Analysis Type:*** **REA4** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	67.3		0.116	MDL	0.428	PQL	mg/Kg	J	E, A

Sample ID: **SL-028-SA8N-SB-9.0-10.0** ***Collected:*** **4/26/2011 12:28:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0642	U	0.0642	MDL	0.214	PQL	mg/Kg	UJ	Q, E
ARSENIC	4.06		0.0856	MDL	0.428	PQL	mg/Kg	J	Q, Q, E
BERYLLIUM	0.620		0.0171	MDL	0.107	PQL	mg/Kg	J	E
CADMIUM	0.155		0.0428	MDL	0.107	PQL	mg/Kg	J	Q, E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE137 **Laboratory: LL**

EDD Filename: PrepDE137_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-028-SA8N-SB-9.0-10.0 *Collected:* 4/26/2011 12:28:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	14.4		0.128	MDL	0.428	PQL	mg/Kg	J	Q, A
COBALT	5.11		0.0214	MDL	0.107	PQL	mg/Kg	J	Q, E, A
COPPER	6.28		0.0706	MDL	0.428	PQL	mg/Kg	J	Q, E, A
LEAD	4.42		0.0111	MDL	0.214	PQL	mg/Kg	J	Q, Q, E
NICKEL	9.72		0.107	MDL	0.428	PQL	mg/Kg	J	Q, E, A
SILVER	0.0133	J	0.0128	MDL	0.107	PQL	mg/Kg	J	Z, Q, E
VANADIUM	32.6		0.0235	MDL	0.107	PQL	mg/Kg	J	Q, Q, A
ZINC	48.1		0.599	MDL	3.21	PQL	mg/Kg	J	E, A

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: SL-027-SA8N-SB-9.0-10 *Collected:* 4/26/2011 11:01:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.37	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: SL-027-SA8N-SB-9.0-10 *Collected:* 4/26/2011 11:01:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0107	J	0.0031	MDL	0.109	PQL	mg/Kg	U	B

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-027-SA8N-SB-9.0-10 *Collected:* 4/26/2011 11:01:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	1.3	J	0.46	MDL	1.4	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE137 **Laboratory: LL**

EDD Filename: PrepDE137_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: VOA

Method: 8260B **Matrix: SO**

Sample ID: SL-027-SA8N-SB-4.0-5.0 *Collected:* 4/26/2011 10:54:00 *Analysis Type:* RES *Dilution:* 0.87

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-METHYL-2-PENTANONE (MIBK)	0.88	J	0.39	MDL	8.0	PQL	ug/Kg	J	Z
ACETONE	19		6.7	MDL	8.0	PQL	ug/Kg	U	B
CHLOROFORM	0.17	J	0.12	MDL	4.0	PQL	ug/Kg	J	Z
TOLUENE	0.14	J	0.08	MDL	4.0	PQL	ug/Kg	U	B

Sample ID: SL-028-SA8N-SB-4.0-5.0 *Collected:* 4/26/2011 12:19:00 *Analysis Type:* RES *Dilution:* 0.94

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	12		7.4	MDL	8.9	PQL	ug/Kg	U	B
CHLOROFORM	0.29	J	0.13	MDL	4.4	PQL	ug/Kg	J	Z
TOLUENE	0.13	J	0.09	MDL	4.4	PQL	ug/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE137 **Laboratory: LL**

EDD Filename: PrepDE137_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE137 **Laboratory: LL**

EDD Filename: PrepDE137_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
Q	Matrix Spike Upper Rejection

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE137 **Laboratory: LL**

EDD Filename: PrepDE137_v1 **eQAPP Name: CDM_SSFL_110509**

R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

DE137

Method Blank Outlier Report

Lab Reporting Batch ID: DE137 **Laboratory: LL**

EDD Filename: DE137_v1. **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11908AB220116	5/5/2011 1:16:00 AM	ALUMINUM IRON PHOSPHORUS STRONTIUM TIN	5.87 mg/Kg 5.63 mg/Kg 1.51 mg/Kg 0.195 mg/Kg 1.76 mg/Kg	SL-027-SA8N-SB-4.0-5.0 SL-027-SA8N-SB-9.0-10 SL-028-SA8N-SB-4.0-5.0 SL-028-SA8N-SB-9.0-10.0
P11908AB220919	5/5/2011 9:19:00 AM	CALCIUM	132 mg/Kg	SL-027-SA8N-SB-4.0-5.0 SL-027-SA8N-SB-9.0-10 SL-028-SA8N-SB-4.0-5.0 SL-028-SA8N-SB-9.0-10.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-027-SA8N-SB-4.0-5.0(RES)	TIN	3.25 mg/Kg	3.25U mg/Kg
SL-027-SA8N-SB-9.0-10(RES)	TIN	3.44 mg/Kg	3.44U mg/Kg
SL-028-SA8N-SB-4.0-5.0(RES)	TIN	3.13 mg/Kg	3.13U mg/Kg
SL-028-SA8N-SB-9.0-10.0(RES)	TIN	3.07 mg/Kg	3.07U mg/Kg

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11926AB221028A	5/3/2011 10:28:00 AM	COPPER	0.0910 mg/Kg	SL-027-SA8N-SB-4.0-5.0 SL-027-SA8N-SB-9.0-10 SL-028-SA8N-SB-4.0-5.0 SL-028-SA8N-SB-9.0-10.0

Method: **7471A**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11911AB220440	5/3/2011 4:40:00 AM	MERCURY	0.0140 mg/Kg	SL-027-SA8N-SB-4.0-5.0 SL-027-SA8N-SB-9.0-10 SL-028-SA8N-SB-4.0-5.0 SL-028-SA8N-SB-9.0-10.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-027-SA8N-SB-9.0-10(RES)	MERCURY	0.0107 mg/Kg	0.0107U mg/Kg

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB42B211316A	5/3/2011 1:16:00 PM	ACETONE METHYLENE CHLORIDE TOLUENE	9.9 ug/Kg 0.60 ug/Kg 0.15 ug/Kg	SL-027-SA8N-SB-4.0-5.0 SL-028-SA8N-SB-4.0-5.0

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Method Blank Outlier Report

Lab Reporting Batch ID: DE137 **Laboratory: LL**

EDD Filename: DE137_v1. **eQAPP Name: CDM_SSFL_110509**

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-027-SA8N-SB-4.0-5.0(RES)	ACETONE	19 ug/Kg	19U ug/Kg
SL-027-SA8N-SB-4.0-5.0(RES)	TOLUENE	0.14 ug/Kg	4.0U ug/Kg
SL-028-SA8N-SB-4.0-5.0(RES)	ACETONE	12 ug/Kg	12U ug/Kg
SL-028-SA8N-SB-4.0-5.0(RES)	TOLUENE	0.13 ug/Kg	4.4U ug/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE137 **Laboratory: LL**

EDD Filename: PrepDE137_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8015M**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-027-SA8N-SB-4.0-5.0MSD (SL-027-SA8N-SB-4.0-5.0)	EFH (C21-C30)	-	-	49.00-123.00	21 (20.00)	EFH (C21-C30)	J (all detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE137 Laboratory: LL

EDD Filename: DE137_v1. eQAPP Name: CDM_SSFL_110509

Method: 8260B
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS1Y39Q211405A LCS1Y39Y211426A LCSY39Q211323A LCSY39Y211344A (TB-042611)	2-Chloro-1,1,1-trifluoroethane DICHLORODIFLUOROMETHAN	131 122	123 121	77.00-120.00 47.00-120.00	- -	2-Chloro-1,1,1-trifluoroethane DICHLORODIFLUOROMETHA	J(all detects)

Method: 8082
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11233AY240336A (SL-027-SA8N-SB-4.0-5.0 SL -027-SA8N-SB-9.0-10 SL -028-SA8N-SB-4.0-5.0 SL -028-SA8N-SB-9.0-10.0)	Aroclor 5442	-	115	36.00-106.00	-	Aroclor 5442 Aroclor 5432 Aroclor 5460	J (all detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11926AQ221031A (SL-027-SA8N-SB-4.0-5.0 SL -027-SA8N-SB-9.0-10 SL -028-SA8N-SB-4.0-5.0 SL -028-SA8N-SB-9.0-10.0)	ANTIMONY	68	-	80.00-120.00	-	ANTIMONY	No Qual, SRM within limits

Reporting Limit Outliers

Lab Reporting Batch ID: DE137 **Laboratory: LL**

EDD Filename: DE137_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-027-SA8N-SB-4.0-5.0	TIN	J	3.25	11.6	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.01	5.79	PQL	mg/Kg	
SL-027-SA8N-SB-9.0-10	TIN	J	3.44	11.2	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.38	5.60	PQL	mg/Kg	
SL-028-SA8N-SB-4.0-5.0	TIN	J	3.13	11.3	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.99	5.66	PQL	mg/Kg	
SL-028-SA8N-SB-9.0-10.0	BORON	J	4.60	5.40	PQL	mg/Kg	J (all detects)
	TIN	J	3.07	10.8	PQL	mg/Kg	
	Zirconium	J	1.50	5.40	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-027-SA8N-SB-4.0-5.0	ANTIMONY	J	0.0956	0.232	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0733	0.463	PQL	mg/Kg	
	SILVER	J	0.0436	0.116	PQL	mg/Kg	
SL-027-SA8N-SB-9.0-10	ANTIMONY	J	0.211	0.226	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0686	0.453	PQL	mg/Kg	
	SILVER	J	0.0634	0.113	PQL	mg/Kg	
SL-028-SA8N-SB-4.0-5.0	ANTIMONY	J	0.0855	0.228	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0581	0.457	PQL	mg/Kg	
	SILVER	J	0.0375	0.114	PQL	mg/Kg	
SL-028-SA8N-SB-9.0-10.0	SELENIUM	J	0.0818	0.428	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0133	0.107	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-027-SA8N-SB-9.0-10	HEXAVALENT CHROMIUM	J	0.37	1.1	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-027-SA8N-SB-9.0-10	MERCURY	J	0.0107	0.109	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-027-SA8N-SB-9.0-10	EFH (C30-C40)	J	1.3	1.4	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE137 **Laboratory: LL**

EDD Filename: DE137_v1. **eQAPP Name: CDM_SSFL_110509**

Method: **8260B**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-027-SA8N-SB-4.0-5.0	4-METHYL-2-PENTANONE (MIBK)	J	0.88	8.0	PQL	ug/Kg	J (all detects)
	CHLOROFORM	J	0.17	4.0	PQL	ug/Kg	
	TOLUENE	J	0.14	4.0	PQL	ug/Kg	
SL-028-SA8N-SB-4.0-5.0	CHLOROFORM	J	0.29	4.4	PQL	ug/Kg	J (all detects)
	TOLUENE	J	0.13	4.4	PQL	ug/Kg	

LDC #: 26078G4 **VALIDATION COMPLETENESS WORKSHEET** Date: 8-29-11
SDG #: DE137 ADR Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer:
2nd Reviewer:

METHOD: Metals (EPA SW 846 Method 6010B/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates:
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	No ICB/CCB qual'd
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	N	MS/D (SDG: DE135)
VII.	Duplicate Sample Analysis	N	D
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	(SDG: DE135)
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	—	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	SL-027-SA8N-SB-4.0-5.0	11		21		31	
2	SL-027-SA8N-SB-9.0-10.0	12		22		32	
3	SL-028-SA8N-SB-4.0-5.0	13		23		33	
4	SL-028-SA8N-SB-9.0-10.0	14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

SAMPLE DELIVERY GROUP

DE138

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
27-Apr-2011	TB-042711	6270790	TB	5030B	8015M	III
27-Apr-2011	TB-042711	6270790	TB	5030B	8260B	III
27-Apr-2011	TB-042711	6270790	TB	5030B	8260B SIM	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	3005A	6010B	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	3020A	6020	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	3510C	8015B	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	3510C	8015M	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	3510C	8081A	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	3510C	8082	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	3510C	8270C	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	3510C	8270C SIM	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	3520C	1625C	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	5030B	8015M	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	5030B	8260B	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	5030B	8260B SIM	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	8330	8330A	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	Gen Prep	300.0	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	Gen Prep	314.0	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	Gen Prep	7199	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	Gen Prep	8015B	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	Gen Prep	8015M	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	METHOD	7470A	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	METHOD	8151A	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	METHOD	8315A	III
27-Apr-2011	FB07-SA8N-QC-042711	6270789	FB	METHOD	9012B	III
27-Apr-2011	FB07-SA8N-QC-042711MSD	P270789M322013A	MSD	Gen Prep	8015B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
27-Apr-2011	FB07-SA8N-QC-042711MS	P270789R321958A	MS	Gen Prep	8015B	III
27-Apr-2011	SL-032-SA8N-SB-4.0-5.0	6270787	N	3050B	6010B	III
27-Apr-2011	SL-032-SA8N-SB-4.0-5.0	6270787	N	3050B	6020	III
27-Apr-2011	SL-032-SA8N-SB-4.0-5.0	6270787	N	3060A	7199	III
27-Apr-2011	SL-032-SA8N-SB-4.0-5.0	6270787	N	3550B	8015M	III
27-Apr-2011	SL-032-SA8N-SB-4.0-5.0	6270787	N	3550B	8082	III
27-Apr-2011	SL-032-SA8N-SB-4.0-5.0	6270787	N	3550B	8270C	III
27-Apr-2011	SL-032-SA8N-SB-4.0-5.0	6270787	N	3550B	8270C SIM	III
27-Apr-2011	SL-032-SA8N-SB-4.0-5.0	6270787	N	5035	8015M	III
27-Apr-2011	SL-032-SA8N-SB-4.0-5.0	6270787	N	5035	8260B	III
27-Apr-2011	SL-032-SA8N-SB-4.0-5.0	6270787	N	5035	8260B SIM	III
27-Apr-2011	SL-032-SA8N-SB-4.0-5.0	6270787	N	METHOD	300.0	III
27-Apr-2011	SL-032-SA8N-SB-4.0-5.0	6270787	N	METHOD	314.0	III
27-Apr-2011	SL-032-SA8N-SB-4.0-5.0	6270787	N	METHOD	6850	III
27-Apr-2011	SL-032-SA8N-SB-4.0-5.0	6270787	N	METHOD	7471A	III
27-Apr-2011	SL-032-SA8N-SB-9.0-10.0	6270788	N	3050B	6010B	III
27-Apr-2011	SL-032-SA8N-SB-9.0-10.0	6270788	N	3050B	6020	III
27-Apr-2011	SL-032-SA8N-SB-9.0-10.0	6270788	N	3060A	7199	III
27-Apr-2011	SL-032-SA8N-SB-9.0-10.0	6270788	N	3550B	8015M	III
27-Apr-2011	SL-032-SA8N-SB-9.0-10.0	6270788	N	3550B	8082	III
27-Apr-2011	SL-032-SA8N-SB-9.0-10.0	6270788	N	3550B	8270C	III
27-Apr-2011	SL-032-SA8N-SB-9.0-10.0	6270788	N	3550B	8270C SIM	III
27-Apr-2011	SL-032-SA8N-SB-9.0-10.0	6270788	N	5035	8015M	III
27-Apr-2011	SL-032-SA8N-SB-9.0-10.0	6270788	N	METHOD	300.0	III
27-Apr-2011	SL-032-SA8N-SB-9.0-10.0	6270788	N	METHOD	314.0	III
27-Apr-2011	SL-032-SA8N-SB-9.0-10.0	6270788	N	METHOD	7471A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE138 Laboratory: LL

EDD Filename: DE138_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-032-SA8N-SB-4.0-5.0 *Collected:* 4/27/2011 3:19:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	3.49	J	1.18	MDL	11.8	PQL	mg/Kg	U	B
Zirconium	2.07	J	0.995	MDL	5.92	PQL	mg/Kg	J	Z

Sample ID: SL-032-SA8N-SB-9.0-10.0 *Collected:* 4/27/2011 3:26:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	2.27	J	1.16	MDL	11.6	PQL	mg/Kg	U	B
Zirconium	2.25	J	0.978	MDL	5.82	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-032-SA8N-SB-4.0-5.0 *Collected:* 4/27/2011 3:19:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0637	J	0.0474	MDL	0.474	PQL	mg/Kg	J	Z

Sample ID: SL-032-SA8N-SB-4.0-5.0 *Collected:* 4/27/2011 3:19:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.170	J	0.0711	MDL	0.237	PQL	mg/Kg	J	Z
SILVER	0.0709	J	0.0142	MDL	0.118	PQL	mg/Kg	J	Z

Sample ID: SL-032-SA8N-SB-9.0-10.0 *Collected:* 4/27/2011 3:26:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.101	J	0.0470	MDL	0.470	PQL	mg/Kg	J	Z

Sample ID: SL-032-SA8N-SB-9.0-10.0 *Collected:* 4/27/2011 3:26:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0901	J	0.0705	MDL	0.235	PQL	mg/Kg	J	Z
SILVER	0.0262	J	0.0141	MDL	0.118	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE138 **Laboratory: LL**

EDD Filename: DE138_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 7470A **Matrix: AQ**

Sample ID: FB07-SA8N-QC-042711 *Collected:* 4/27/2011 1:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.000046	U	0.000046	MDL	0.00020	PQL	mg/L	UJ	L

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: SL-032-SA8N-SB-4.0-5.0 *Collected:* 4/27/2011 3:19:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0182	J	0.0033	MDL	0.114	PQL	mg/Kg	U	B

Sample ID: SL-032-SA8N-SB-9.0-10.0 *Collected:* 4/27/2011 3:26:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0251	J	0.0033	MDL	0.117	PQL	mg/Kg	U	B

Method Category: SVOA

Method: 1625C **Matrix: AQ**

Sample ID: FB07-SA8N-QC-042711 *Collected:* 4/27/2011 1:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	1.39	J	1.00	MDL	2.00	PQL	ng/L	J	Z

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-032-SA8N-SB-4.0-5.0 *Collected:* 4/27/2011 3:19:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	0.49	J	0.47	MDL	1.4	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE138 **Laboratory: LL**

EDD Filename: DE138_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-032-SA8N-SB-9.0-10.0 *Collected:* 4/27/2011 3:26:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	0.55	J	0.48	MDL	1.4	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8270C SIM **Matrix: AQ**

Sample ID: FB07-SA8N-QC-042711 *Collected:* 4/27/2011 1:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.026	J	0.010	MDL	0.050	PQL	ug/L	J	Z
2-METHYLNAPHTHALENE	0.030	J	0.010	MDL	0.050	PQL	ug/L	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	0.12	J	0.050	MDL	1.0	PQL	ug/L	U	B
Diethylphthalate	0.064	J	0.050	MDL	1.0	PQL	ug/L	U	B
Di-n-butylphthalate	0.074	J	0.050	MDL	1.0	PQL	ug/L	U	B

Method Category: VOA

Method: 8260B **Matrix: SO**

Sample ID: SL-032-SA8N-SB-4.0-5.0 *Collected:* 4/27/2011 3:19:00 *Analysis Type:* RES *Dilution:* 0.86

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.1		6.8	MDL	8.1	PQL	ug/Kg	U	B
TOLUENE	0.14	J	0.08	MDL	4.1	PQL	ug/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE138 **Laboratory: LL**

EDD Filename: DE138_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision
E	Laboratory Triplicate Precision
E	Matrix Spike Precision

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE138 **Laboratory: LL**

EDD Filename: DE138_v1 **eQAPP Name: CDM_SSFL_110509**

F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Laboratory Triplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE138 **Laboratory: LL**

EDD Filename: DE138_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE138

Method Blank Outlier Report

Lab Reporting Batch ID: DE138 **Laboratory: LL**

EDD Filename: DE138_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11908AB220116	5/5/2011 1:16:00 AM	ALUMINUM IRON PHOSPHORUS STRONTIUM TIN	5.87 mg/Kg 5.63 mg/Kg 1.51 mg/Kg 0.195 mg/Kg 1.76 mg/Kg	SL-032-SA8N-SB-4.0-5.0 SL-032-SA8N-SB-9.0-10.0
P11908AB220919	5/5/2011 9:19:00 AM	CALCIUM	132 mg/Kg	SL-032-SA8N-SB-4.0-5.0 SL-032-SA8N-SB-9.0-10.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-032-SA8N-SB-4.0-5.0(RES)	TIN	3.49 mg/Kg	3.49U mg/Kg
SL-032-SA8N-SB-9.0-10.0(RES)	TIN	2.27 mg/Kg	2.27U mg/Kg

Method: **6020**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P12450BB221348A	5/6/2011 1:48:00 PM	CADMIUM LEAD	0.00038 mg/L 0.000054 mg/L	FB07-SA8N-QC-042711

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11926AB221028A	5/3/2011 10:28:00 AM	COPPER	0.0910 mg/Kg	SL-032-SA8N-SB-4.0-5.0 SL-032-SA8N-SB-9.0-10.0

Method: **7471A**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11911AB220440	5/3/2011 4:40:00 AM	MERCURY	0.0140 mg/Kg	SL-032-SA8N-SB-4.0-5.0 SL-032-SA8N-SB-9.0-10.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-032-SA8N-SB-4.0-5.0(RES)	MERCURY	0.0182 mg/Kg	0.0182U mg/Kg
SL-032-SA8N-SB-9.0-10.0(RES)	MERCURY	0.0251 mg/Kg	0.0251U mg/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DE138 **Laboratory: LL**

EDD Filename: DE138_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB42B211316A	5/3/2011 1:16:00 PM	ACETONE METHYLENE CHLORIDE TOLUENE	9.9 ug/Kg 0.60 ug/Kg 0.15 ug/Kg	SL-032-SA8N-SB-4.0-5.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-032-SA8N-SB-4.0-5.0(RES)	ACETONE	8.1 ug/Kg	8.1U ug/Kg
SL-032-SA8N-SB-4.0-5.0(RES)	TOLUENE	0.14 ug/Kg	4.1U ug/Kg

Method: **8270C SIM**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKWE12B260823	5/5/2011 8:23:00 AM	BIS(2-ETHYLHEXYL)PHTHALATE Diethylphthalate Di-n-butylphthalate Di-n-octylphthalate	0.056 ug/L 0.11 ug/L 0.089 ug/L 0.24 ug/L	FB07-SA8N-QC-042711

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
FB07-SA8N-QC-042711(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	0.12 ug/L	1.0U ug/L
FB07-SA8N-QC-042711(RES)	Diethylphthalate	0.064 ug/L	1.0U ug/L
FB07-SA8N-QC-042711(RES)	Di-n-butylphthalate	0.074 ug/L	1.0U ug/L

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE138 **Laboratory: LL**

EDD Filename: DE138_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8330A
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11197AQ242029A P11197AY242111A (FB07-SA8N-QC-042711)	2,4,6-TRINITROTOLUENE	110	110	76.00-109.00	-	2,4,6-TRINITROTOLUENE	J (all detects)

Method: 8082
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11233AY240032A (FB07-SA8N-QC-042711)	Aroclor 5442	-	86	35.00-84.00	-	Aroclor 5432, Aroclor 5442 Aroclor 5460	J(all detects)

Method: 7470A
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11813EY220701 (FB07-SA8N-QC-042711)	MERCURY	-	87	90.00-115.00	-	MERCURY	J(all detects) UJ(all non-detects)

Method: 8260B
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS1Y39Q211405A LCS1Y39Y211426A LCSY39Q211323A LCSY39Y211344A (FB07-SA8N-QC-042711 TB -042711)	2-Chloro-1,1,1-trifluoroethane DICHLORODIFLUOROMETHAN	131 122	123 121	77.00-120.00 47.00-120.00	- -	2-Chloro-1,1,1-trifluoroethane DICHLORODIFLUOROMETHA	J(all detects)

Method: 8082
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11233AY240336A (SL-032-SA8N-SB-4.0-5.0 SL -032-SA8N-SB-9.0-10.0)	Aroclor 5442	-	115	36.00-106.00	-	Aroclor 5432 Aroclor 5442 Aroclor 5460	J(all detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE138 **Laboratory: LL**

EDD Filename: DE138_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6020**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*LCS %R*	*LCSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
P11926AQ221031A (SL-032-SA8N-SB-4.0-5.0 SL-032-SA8N-SB-9.0-10.0)	ANTIMONY	68	-	80.00-120.00	-	ANTIMONY	No Qual, SRM within QC limits

Reporting Limit Outliers

Lab Reporting Batch ID: DE138 **Laboratory: LL**

EDD Filename: DE138_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1625C

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
FB07-SA8N-QC-042711	N-NITROSODIMETHYLAMINE	J	1.39	2.00	PQL	ng/L	J (all detects)

Method: 8270C SIM

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
FB07-SA8N-QC-042711	1-METHYLNAPHTHALENE	J	0.026	0.050	PQL	ug/L	J (all detects)
	2-METHYLNAPHTHALENE	J	0.030	0.050	PQL	ug/L	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	0.12	1.0	PQL	ug/L	
	Diethylphthalate	J	0.064	1.0	PQL	ug/L	
	Di-n-butylphthalate	J	0.074	1.0	PQL	ug/L	

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-032-SA8N-SB-4.0-5.0	TIN	J	3.49	11.8	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.07	5.92	PQL	mg/Kg	
SL-032-SA8N-SB-9.0-10.0	TIN	J	2.27	11.6	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.25	5.82	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-032-SA8N-SB-4.0-5.0	ANTIMONY	J	0.170	0.237	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0637	0.474	PQL	mg/Kg	
	SILVER	J	0.0709	0.118	PQL	mg/Kg	
SL-032-SA8N-SB-9.0-10.0	ANTIMONY	J	0.0901	0.235	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.101	0.470	PQL	mg/Kg	
	SILVER	J	0.0262	0.118	PQL	mg/Kg	

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-032-SA8N-SB-4.0-5.0	MERCURY	J	0.0182	0.114	PQL	mg/Kg	J (all detects)
SL-032-SA8N-SB-9.0-10.0	MERCURY	J	0.0251	0.117	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE138 **Laboratory: LL**

EDD Filename: DE138_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-032-SA8N-SB-4.0-5.0	EFH (C21-C30)	J	0.49	1.4	PQL	mg/Kg	J (all detects)
SL-032-SA8N-SB-9.0-10.0	EFH (C21-C30)	J	0.55	1.4	PQL	mg/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-032-SA8N-SB-4.0-5.0	TOLUENE	J	0.14	4.1	PQL	ug/Kg	J (all detects)

LDC #: 26275C4 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/28/11
SDG #: DE138 ADR Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: W
2nd Reviewer: C

METHOD: Metals (EPA SW 846 Method 6010B/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 4/2-4/11
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	A	No qual
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	N	} client specified.
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N A	
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	N	Not performed
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	ND	FB = 3

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	SL-032-SA8N-SB-4.0-5.0	11		21		31	
2	SL-032-SA8N-SB-9.0-10.0	12		22		32	
3	FB07-SA8N-QC-042711	13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: MS/MSD from SDG DE135. (Area AE), No qual

SAMPLE DELIVERY GROUP

DE139

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
28-Apr-2011	SL-041-SA8N-SB-4.0-5.0	6271850	N	3050B	6010B	III
28-Apr-2011	SL-041-SA8N-SB-4.0-5.0	6271850	N	3050B	6020	III
28-Apr-2011	SL-041-SA8N-SB-4.0-5.0	6271850	N	3060A	7199	III
28-Apr-2011	SL-041-SA8N-SB-4.0-5.0	6271850	N	3550B	8015M	III
28-Apr-2011	SL-041-SA8N-SB-4.0-5.0	6271850	N	3550B	8082	III
28-Apr-2011	SL-041-SA8N-SB-4.0-5.0	6271850	N	3550B	8270C	III
28-Apr-2011	SL-041-SA8N-SB-4.0-5.0	6271850	N	3550B	8270C SIM	III
28-Apr-2011	SL-041-SA8N-SB-4.0-5.0	6271850	N	5035	8015M	III
28-Apr-2011	SL-041-SA8N-SB-4.0-5.0	6271850	N	5035	8260B	III
28-Apr-2011	SL-041-SA8N-SB-4.0-5.0	6271850	N	5035	8260B SIM	III
28-Apr-2011	SL-041-SA8N-SB-4.0-5.0	6271850	N	METHOD	300.0	III
28-Apr-2011	SL-041-SA8N-SB-4.0-5.0	6271850	N	METHOD	314.0	III
28-Apr-2011	SL-041-SA8N-SB-4.0-5.0	6271850	N	METHOD	7471A	III
28-Apr-2011	SL-041-SA8N-SB-4.0-5.0DUP	P271850D271425A	DUP	METHOD	300.0	III
28-Apr-2011	SL-041-SA8N-SB-4.0-5.0MS	P271850R271509A	MS	METHOD	300.0	III
28-Apr-2011	SL-041-SA8N-SB-9.0-10.0	6271851	N	3050B	6010B	III
28-Apr-2011	SL-041-SA8N-SB-9.0-10.0	6271851	N	3050B	6020	III
28-Apr-2011	SL-041-SA8N-SB-9.0-10.0	6271851	N	3060A	7199	III
28-Apr-2011	SL-041-SA8N-SB-9.0-10.0	6271851	N	3550B	8015M	III
28-Apr-2011	SL-041-SA8N-SB-9.0-10.0	6271851	N	3550B	8082	III
28-Apr-2011	SL-041-SA8N-SB-9.0-10.0	6271851	N	3550B	8270C	III
28-Apr-2011	SL-041-SA8N-SB-9.0-10.0	6271851	N	3550B	8270C SIM	III
28-Apr-2011	SL-041-SA8N-SB-9.0-10.0	6271851	N	5035	8015M	III
28-Apr-2011	SL-041-SA8N-SB-9.0-10.0	6271851	N	METHOD	300.0	III
28-Apr-2011	SL-041-SA8N-SB-9.0-10.0	6271851	N	METHOD	314.0	III
28-Apr-2011	SL-041-SA8N-SB-9.0-10.0	6271851	N	METHOD	7471A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
28-Apr-2011	EB05-SA8N-SB-042811	6271852	EB	3005A	6010B	III
28-Apr-2011	EB05-SA8N-SB-042811	6271852	EB	3020A	6020	III
28-Apr-2011	EB05-SA8N-SB-042811	6271852	EB	3510C	8082	III
28-Apr-2011	EB05-SA8N-SB-042811	6271852	EB	3510C	8270C	III
28-Apr-2011	EB05-SA8N-SB-042811	6271852	EB	3510C	8270C SIM	III
28-Apr-2011	EB05-SA8N-SB-042811	6271852	EB	5030B	8260B	III
28-Apr-2011	EB05-SA8N-SB-042811	6271852	EB	5030B	8260B SIM	III
28-Apr-2011	EB05-SA8N-SB-042811	6271852	EB	Gen Prep	300.0	III
28-Apr-2011	EB05-SA8N-SB-042811	6271852	EB	Gen Prep	314.0	III
28-Apr-2011	EB05-SA8N-SB-042811	6271852	EB	Gen Prep	7199	III
28-Apr-2011	EB05-SA8N-SB-042811	6271852	EB	METHOD	7470A	III
28-Apr-2011	TB-042811	6271853	TB	5030B	8015M	III
28-Apr-2011	TB-042811	6271853	TB	5030B	8260B	III
28-Apr-2011	TB-042811	6271853	TB	5030B	8260B SIM	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE139 **Laboratory:** LL

EDD Filename: DE139_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-041-SA8N-SB-4.0-5.0 *Collected:* 4/28/2011 12:09:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.6		0.94	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-041-SA8N-SB-9.0-10.0 *Collected:* 4/28/2011 12:19:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	6.8		0.93	MDL	1.2	PQL	mg/Kg	J	Q

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-041-SA8N-SB-4.0-5.0 *Collected:* 4/28/2011 12:09:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	3.17	J	1.14	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	2.36	J	0.961	MDL	5.72	PQL	mg/Kg	J	Z

Sample ID: SL-041-SA8N-SB-9.0-10.0 *Collected:* 4/28/2011 12:19:00 *Analysis Type:* REA3 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.58	J	1.03	MDL	5.78	PQL	mg/Kg	J	Z
CALCIUM	50100		7.09	MDL	23.1	PQL	mg/Kg	J	E
TIN	2.91	J	1.16	MDL	11.6	PQL	mg/Kg	U	B
Zirconium	5.40	J	0.972	MDL	5.78	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-041-SA8N-SB-4.0-5.0 *Collected:* 4/28/2011 12:09:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.130	J	0.0457	MDL	0.457	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE139 **Laboratory: LL**

EDD Filename: DE139_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-041-SA8N-SB-4.0-5.0 *Collected:* 4/28/2011 12:09:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.147	J	0.0686	MDL	0.229	PQL	mg/Kg	J	Z
SILVER	0.0693	J	0.0137	MDL	0.114	PQL	mg/Kg	J	Z

Sample ID: SL-041-SA8N-SB-9.0-10.0 *Collected:* 4/28/2011 12:19:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.222	J	0.0694	MDL	0.231	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.872		0.0185	MDL	0.116	PQL	mg/Kg	J	Q
CHROMIUM	31.5		0.139	MDL	0.463	PQL	mg/Kg	J	A
COBALT	12.6		0.0231	MDL	0.116	PQL	mg/Kg	J	A
COPPER	14.4		0.0763	MDL	0.463	PQL	mg/Kg	J	A
LEAD	8.50		0.0120	MDL	0.231	PQL	mg/Kg	J	A
NICKEL	18.8		0.116	MDL	0.463	PQL	mg/Kg	J	A
SILVER	0.0427	J	0.0139	MDL	0.116	PQL	mg/Kg	J	Z
VANADIUM	56.3		0.0254	MDL	0.116	PQL	mg/Kg	J	A
ZINC	47.1		0.648	MDL	3.47	PQL	mg/Kg	J	A

Sample ID: SL-041-SA8N-SB-9.0-10.0 *Collected:* 4/28/2011 12:19:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0463	U	0.0463	MDL	0.463	PQL	mg/Kg	UJ	Q

Sample ID: SL-041-SA8N-SB-9.0-10.0 *Collected:* 4/28/2011 12:19:00 *Analysis Type:* REA8 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	123		0.125	MDL	0.463	PQL	mg/Kg	J	A

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: SL-041-SA8N-SB-4.0-5.0 *Collected:* 4/28/2011 12:09:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.32	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE139 **Laboratory:** LL

EDD Filename: DE139_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS
Method: 7199 **Matrix:** SO

Sample ID: SL-041-SA8N-SB-9.0-10.0 *Collected:* 4/28/2011 12:19:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.30	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Method Category: METALS
Method: 7470A **Matrix:** AQ

Sample ID: EB05-SA8N-SB-042811 *Collected:* 4/28/2011 2:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.000046	U	0.000046	MDL	0.00020	PQL	mg/L	UJ	L

Method Category: METALS
Method: 7471A **Matrix:** SO

Sample ID: SL-041-SA8N-SB-4.0-5.0 *Collected:* 4/28/2011 12:09:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0103	J	0.0033	MDL	0.114	PQL	mg/Kg	U	B

Method Category: SVOA
Method: 8015M **Matrix:** SO

Sample ID: SL-041-SA8N-SB-4.0-5.0 *Collected:* 4/28/2011 12:09:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	0.54	J	0.47	MDL	1.4	PQL	mg/Kg	J	Z

Method Category: SVOA
Method: 8270C SIM **Matrix:** AQ

Sample ID: EB05-SA8N-SB-042811 *Collected:* 4/28/2011 2:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	0.13	J	0.049	MDL	0.98	PQL	ug/L	U	B
Diethylphthalate	0.17	J	0.049	MDL	0.98	PQL	ug/L	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE139 Laboratory: LL

EDD Filename: DE139_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 8270C SIM **Matrix:** AQ

Sample ID: EB05-SA8N-SB-042811 *Collected:* 4/28/2011 2:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Di-n-butylphthalate	0.35	J	0.049	MDL	0.98	PQL	ug/L	U	B

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-041-SA8N-SB-4.0-5.0 *Collected:* 4/28/2011 12:09:00 *Analysis Type:* RES *Dilution:* 0.85

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	7.8	J	6.7	MDL	8.0	PQL	ug/Kg	U	B
TOLUENE	0.10	J	0.08	MDL	4.0	PQL	ug/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE139 **Laboratory: LL**

EDD Filename: DE139_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision
E	Laboratory Triplicate Precision
E	Matrix Spike Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE139 **Laboratory: LL**

EDD Filename: DE139_v1 **eQAPP Name: CDM_SSFL_110509**

F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Laboratory Triplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE139 **Laboratory: LL**

EDD Filename: DE139_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE139

Method Blank Outlier Report

Lab Reporting Batch ID: DE139 **Laboratory: LL**

EDD Filename: DE139_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11908AB220116	5/5/2011 1:16:00 AM	ALUMINUM IRON PHOSPHORUS STRONTIUM TIN	5.87 mg/Kg 5.63 mg/Kg 1.51 mg/Kg 0.195 mg/Kg 1.76 mg/Kg	SL-041-SA8N-SB-4.0-5.0
P11908AB220919	5/5/2011 9:19:00 AM	CALCIUM	132 mg/Kg	SL-041-SA8N-SB-4.0-5.0
P12308AB220919	5/7/2011 9:19:00 AM	CALCIUM LITHIUM MANGANESE PHOSPHORUS TIN	10.6 mg/Kg 0.43 mg/Kg 0.224 mg/Kg 1.05 mg/Kg 1.32 mg/Kg	SL-041-SA8N-SB-9.0-10.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-041-SA8N-SB-4.0-5.0(RES)	TIN	3.17 mg/Kg	3.17U mg/Kg
SL-041-SA8N-SB-9.0-10.0(REA3)	TIN	2.91 mg/Kg	2.91U mg/Kg

Method: **6020**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P12450BB221348A	5/6/2011 1:48:00 PM	CADMIUM LEAD	0.00038 mg/L 0.000054 mg/L	EB05-SA8N-SB-042811

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11926AB221028A	5/3/2011 10:28:00 AM	COPPER	0.0910 mg/Kg	SL-041-SA8N-SB-4.0-5.0
P12326AB221311A	5/5/2011 1:11:00 PM	COPPER VANADIUM	0.142 mg/Kg 0.0876 mg/Kg	SL-041-SA8N-SB-9.0-10.0

Method: **7471A**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P11911AB220440	5/3/2011 4:40:00 AM	MERCURY	0.0140 mg/Kg	SL-041-SA8N-SB-4.0-5.0

Method Blank Outlier Report

Lab Reporting Batch ID: DE139 **Laboratory: LL**

EDD Filename: DE139_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **7471A**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-041-SA8N-SB-4.0-5.0(RES)	MERCURY	0.0103 mg/Kg	0.0103U mg/Kg

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB42B211316A	5/3/2011 1:16:00 PM	ACETONE METHYLENE CHLORIDE TOLUENE	9.9 ug/Kg 0.60 ug/Kg 0.15 ug/Kg	SL-041-SA8N-SB-4.0-5.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-041-SA8N-SB-4.0-5.0(RES)	ACETONE	7.8 ug/Kg	8.0U ug/Kg
SL-041-SA8N-SB-4.0-5.0(RES)	TOLUENE	0.10 ug/Kg	4.0U ug/Kg

Method: **8270C SIM**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKWE12B260823	5/5/2011 8:23:00 AM	BIS(2-ETHYLHEXYL)PHTHALATE Diethylphthalate Di-n-butylphthalate Di-n-octylphthalate	0.056 ug/L 0.11 ug/L 0.089 ug/L 0.24 ug/L	EB05-SA8N-SB-042811

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
EB05-SA8N-SB-042811(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	0.13 ug/L	0.98U ug/L
EB05-SA8N-SB-042811(RES)	Diethylphthalate	0.17 ug/L	0.98U ug/L
EB05-SA8N-SB-042811(RES)	Di-n-butylphthalate	0.35 ug/L	0.98U ug/L

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE139 **Laboratory: LL**

EDD Filename: DE139_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **300.0**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-041-SA8N-SB-4.0-5.0MS (SL-041-SA8N-SB-4.0-5.0 SL-041-SA8N-SB-9.0-10.0)	FLUORIDE	75	-	80.00-120.00	-	FLUORIDE	J (all detects) UJ (all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE139 **Laboratory: LL**

EDD Filename: DE139_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	*Analyte*	*Sample RPD*	*eQAPP RPD*	*Flag*
SL-041-SA8N-SB-4.0-5.0DUP (SL-041-SA8N-SB-4.0-5.0 SL-041-SA8N-SB-9.0-10.0)	FLUORIDE	73	20.00	No Qual, OK by difference

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE139 **Laboratory: LL**

EDD Filename: DE139_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8082
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11233AY240032A (EB05-SA8N-SB-042811)	Aroclor 5442	-	86	35.00-84.00	-	Aroclor 5432, Aroclor 5442, Aroclor 5460	J (all detects)

Method: 7470A
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P13013BQ220802 P13013BY220804 (EB05-SA8N-SB-042811)	MERCURY	86	88	90.00-115.00	-	MERCURY	J(all detects) UJ(all non-detects)

Method: 8260B
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCS1Y39Q211405A LCS1Y39Y211426A LCSY39Q211323A LCSY39Y211344A (EB05-SA8N-SB-042811 TB -042811)	2-Chloro-1,1,1-trifluoroethane DICHLORODIFLUOROMETHAN	131 122	123 121	77.00-120.00 47.00-120.00	- -	2-Chloro-1,1,1-trifluoroethane DICHLORODIFLUOROMETHA	J(all detects)

Method: 8082
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11233AY240336A (SL-041-SA8N-SB-4.0-5.0 SL-041-SA8N-SB-9.0-10.0)	Aroclor 5442	-	115	36.00-106.00	-	Aroclor 5432 Aroclor 5442 Aroclor 5460	J(all detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11926AQ221031A (SL-041-SA8N-SB-4.0-5.0)	ANTIMONY	68	-	80.00-120.00	-	ANTIMONY	No Qual, SRM within limits

Reporting Limit Outliers

Lab Reporting Batch ID: DE139 **Laboratory: LL**

EDD Filename: DE139_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C SIM

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB05-SA8N-SB-042811	BIS(2-ETHYLHEXYL)PHTHALATE	J	0.13	0.98	PQL	ug/L	J (all detects)
	Diethylphthalate	J	0.17	0.98	PQL	ug/L	
	Di-n-butylphthalate	J	0.35	0.98	PQL	ug/L	

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-041-SA8N-SB-4.0-5.0	TIN	J	3.17	11.4	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.36	5.72	PQL	mg/Kg	
SL-041-SA8N-SB-9.0-10.0	BORON	J	4.58	5.78	PQL	mg/Kg	J (all detects)
	TIN	J	2.91	11.6	PQL	mg/Kg	
	Zirconium	J	5.40	5.78	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-041-SA8N-SB-4.0-5.0	ANTIMONY	J	0.147	0.229	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.130	0.457	PQL	mg/Kg	
	SILVER	J	0.0693	0.114	PQL	mg/Kg	
SL-041-SA8N-SB-9.0-10.0	ANTIMONY	J	0.222	0.231	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0427	0.116	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-041-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.32	1.2	PQL	mg/Kg	J (all detects)
SL-041-SA8N-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.30	1.2	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-041-SA8N-SB-4.0-5.0	MERCURY	J	0.0103	0.114	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE139 **Laboratory: LL**

EDD Filename: DE139_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-041-SA8N-SB-4.0-5.0	EFH (C21-C30)	J	0.54	1.4	PQL	mg/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-041-SA8N-SB-4.0-5.0	ACETONE	J	7.8	8.0	PQL	ug/Kg	J (all detects)
	TOLUENE	J	0.10	4.0	PQL	ug/Kg	

LDC #: 26275D4 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/28/11

SDG #: DE139 ADR Page: 1 of 1

Laboratory: Lancaster Laboratories Reviewer: MM

2nd Reviewer:

METHOD: Metals (EPA SW 846 Method 6010B/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 4/28/11
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	A	No qual
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	N	} See DE140 for #2
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N A	SRM
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution		See DE140 for #2.
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	ND	EB=3

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1 1	SL-041-SA8N-SB-4.0-5.0	11		21		31	
2 2	SL-041-SA8N-SB-9.0-10.0	12		22		32	
3	EB05-SA8N-SB-042811	13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: #1 MS/MSD from SDG DE135 (Area A5) No qual
#2 MS/MSD/Dup from SDG DE140. (LDC# 26275E)
SD

SAMPLE DELIVERY GROUP

DE140

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0	6272812	N	3050B	6010B	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0	6272812	N	3050B	6020	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0	6272812	N	3060A	7199	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0	6272812	N	3550B	8015M	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0	6272812	N	3550B	8082	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0	6272812	N	3550B	8270C	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0	6272812	N	3550B	8270C SIM	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0	6272812	N	5035	8015M	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0	6272812	N	5035	8260B	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0	6272812	N	5035	8260B SIM	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0	6272812	N	METHOD	300.0	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0	6272812	N	METHOD	314.0	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0	6272812	N	METHOD	7471A	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MS	6272813	MS	3050B	6010B	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MS	6272813	MS	3050B	6020	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MS	6272813	MS	3060A	7199	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MS	6272813	MS	3550B	8015M	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MS	6272813	MS	3550B	8082	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MS	6272813	MS	3550B	8270C	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MS	6272813	MS	3550B	8270C SIM	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MS	6272813	MS	5035	8015M	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MS	6272813	MS	5035	8260B	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MS	6272813	MS	5035	8260B SIM	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MS	6272813	MS	METHOD	300.0	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MS	6272813	MS	METHOD	314.0	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MS	6272813	MS	METHOD	7471A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MSD	6272814	MSD	3050B	6010B	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MSD	6272814	MSD	3050B	6020	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MSD	6272814	MSD	3550B	8015M	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MSD	6272814	MSD	3550B	8082	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MSD	6272814	MSD	3550B	8270C	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MSD	6272814	MSD	3550B	8270C SIM	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MSD	6272814	MSD	5035	8015M	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MSD	6272814	MSD	5035	8260B	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MSD	6272814	MSD	5035	8260B SIM	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0MSD	6272814	MSD	METHOD	7471A	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0DUP	6272815	DUP	3050B	6010B	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0DUP	6272815	DUP	3050B	6020	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0DUP	6272815	DUP	3060A	7199	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0DUP	6272815	DUP	METHOD	300.0	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0DUP	6272815	DUP	METHOD	314.0	III
29-Apr-2011	SL-040-SA8N-SB-4.0-5.0DUP	6272815	DUP	METHOD	7471A	III
29-Apr-2011	SL-040-SA8N-SB-9.0-10.0	6272816	N	3050B	6010B	III
29-Apr-2011	SL-040-SA8N-SB-9.0-10.0	6272816	N	3050B	6020	III
29-Apr-2011	SL-040-SA8N-SB-9.0-10.0	6272816	N	3060A	7199	III
29-Apr-2011	SL-040-SA8N-SB-9.0-10.0	6272816	N	3550B	8015M	III
29-Apr-2011	SL-040-SA8N-SB-9.0-10.0	6272816	N	3550B	8082	III
29-Apr-2011	SL-040-SA8N-SB-9.0-10.0	6272816	N	3550B	8270C	III
29-Apr-2011	SL-040-SA8N-SB-9.0-10.0	6272816	N	3550B	8270C SIM	III
29-Apr-2011	SL-040-SA8N-SB-9.0-10.0	6272816	N	5035	8015M	III
29-Apr-2011	SL-040-SA8N-SB-9.0-10.0	6272816	N	METHOD	300.0	III
29-Apr-2011	SL-040-SA8N-SB-9.0-10.0	6272816	N	METHOD	314.0	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
29-Apr-2011	SL-040-SA8N-SB-9.0-10.0	6272816	N	METHOD	7471A	III
29-Apr-2011	DUP06-SA8N-QC-042911	6272807	FD	3050B	6010B	III
29-Apr-2011	DUP06-SA8N-QC-042911	6272807	FD	3050B	6020	III
29-Apr-2011	DUP06-SA8N-QC-042911	6272807	FD	3060A	7199	III
29-Apr-2011	DUP06-SA8N-QC-042911	6272807	FD	3550B	8015M	III
29-Apr-2011	DUP06-SA8N-QC-042911	6272807	FD	3550B	8082	III
29-Apr-2011	DUP06-SA8N-QC-042911	6272807	FD	3550B	8270C	III
29-Apr-2011	DUP06-SA8N-QC-042911	6272807	FD	3550B	8270C SIM	III
29-Apr-2011	DUP06-SA8N-QC-042911	6272807	FD	5035	8015M	III
29-Apr-2011	DUP06-SA8N-QC-042911	6272807	FD	5035	8260B	III
29-Apr-2011	DUP06-SA8N-QC-042911	6272807	FD	5035	8260B SIM	III
29-Apr-2011	DUP06-SA8N-QC-042911	6272807	FD	METHOD	300.0	III
29-Apr-2011	DUP06-SA8N-QC-042911	6272807	FD	METHOD	314.0	III
29-Apr-2011	DUP06-SA8N-QC-042911	6272807	FD	METHOD	7471A	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0	6272817	N	3050B	6010B	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0	6272817	N	3050B	6020	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0	6272817	N	3060A	7199	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0	6272817	N	3546	1625C	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0	6272817	N	3550B	8015B	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0	6272817	N	3550B	8015M	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0	6272817	N	3550B	8082	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0	6272817	N	3550B	8270C	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0	6272817	N	3550B	8270C SIM	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0	6272817	N	5035	8015M	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0	6272817	N	5035	8260B	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0	6272817	N	5035	8260B SIM	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0	6272817	N	8330	8330A	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0	6272817	N	METHOD	300.0	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0	6272817	N	METHOD	314.0	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0	6272817	N	METHOD	7471A	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0	6272817	N	METHOD	8015B	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0	6272817	N	METHOD	8015M	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0	6272817	N	METHOD	8315A	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0	6272817	N	METHOD	9012B	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0DUP	P272817D270913A	DUP	METHOD	9012B	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0MSD	P272817M241959A	MSD	METHOD	8315A	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0MS	P272817R241940A	MS	METHOD	8315A	III
29-Apr-2011	SL-049-SA8N-SB-4.0-5.0MS	P272817R270917A	MS	METHOD	9012B	III
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0	6272818	N	3050B	6010B	III
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0	6272818	N	3050B	6020	III
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0	6272818	N	3060A	7199	III
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0	6272818	N	3546	1625C	III
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0	6272818	N	3550B	8015B	III
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0	6272818	N	3550B	8015M	III
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0	6272818	N	3550B	8082	III
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0	6272818	N	3550B	8270C	III
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0	6272818	N	3550B	8270C SIM	III
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0	6272818	N	5035	8015M	III
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0	6272818	N	5035	8260B	III
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0	6272818	N	5035	8260B SIM	III
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0	6272818	N	8330	8330A	III
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0	6272818	N	METHOD	300.0	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0	6272818	N	METHOD	314.0	III
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0	6272818	N	METHOD	7471A	III
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0	6272818	N	METHOD	8015B	III
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0	6272818	N	METHOD	8015M	III
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0	6272818	N	METHOD	8315A	III
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0	6272818	N	METHOD	9012B	III
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0MSD	P272818M322341A	MSD	METHOD	8015B	III
29-Apr-2011	SL-049-SA8N-SB-8.0-9.0MS	P272818R322327A	MS	METHOD	8015B	III
29-Apr-2011	SL-013-SA8N-SB-2.0-3.0	6272808	N	3050B	6010B	III
29-Apr-2011	SL-013-SA8N-SB-2.0-3.0	6272808	N	3050B	6020	III
29-Apr-2011	SL-013-SA8N-SB-2.0-3.0	6272808	N	3060A	7199	III
29-Apr-2011	SL-013-SA8N-SB-2.0-3.0	6272808	N	3550B	8082	III
29-Apr-2011	SL-013-SA8N-SB-2.0-3.0	6272808	N	3550B	8270C	III
29-Apr-2011	SL-013-SA8N-SB-2.0-3.0	6272808	N	3550B	8270C SIM	III
29-Apr-2011	SL-013-SA8N-SB-2.0-3.0	6272808	N	5035	8260B	III
29-Apr-2011	SL-013-SA8N-SB-2.0-3.0	6272808	N	5035	8260B SIM	III
29-Apr-2011	SL-013-SA8N-SB-2.0-3.0	6272808	N	METHOD	300.0	III
29-Apr-2011	SL-013-SA8N-SB-2.0-3.0	6272808	N	METHOD	314.0	III
29-Apr-2011	SL-013-SA8N-SB-2.0-3.0	6272808	N	METHOD	7471A	III
29-Apr-2011	SL-013-SA8N-SB-2.0-3.0	6272808	N	METHOD	8015M	III
29-Apr-2011	SL-013-SA8N-SB-2.0-3.0MSD	P272808M322006A	MSD	METHOD	8015M	III
29-Apr-2011	SL-013-SA8N-SB-2.0-3.0MS	P272808R321949A	MS	METHOD	8015M	III
29-Apr-2011	SL-014-SA8N-SB-4.0-5.0	6272809	N	3050B	6010B	III
29-Apr-2011	SL-014-SA8N-SB-4.0-5.0	6272809	N	3050B	6020	III
29-Apr-2011	SL-014-SA8N-SB-4.0-5.0	6272809	N	3060A	7199	III
29-Apr-2011	SL-014-SA8N-SB-4.0-5.0	6272809	N	3550B	8082	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
29-Apr-2011	SL-014-SA8N-SB-4.0-5.0	6272809	N	3550B	8270C	III
29-Apr-2011	SL-014-SA8N-SB-4.0-5.0	6272809	N	3550B	8270C SIM	III
29-Apr-2011	SL-014-SA8N-SB-4.0-5.0	6272809	N	5035	8260B SIM	III
29-Apr-2011	SL-014-SA8N-SB-4.0-5.0	6272809	N	Gen Prep	8260B	III
29-Apr-2011	SL-014-SA8N-SB-4.0-5.0	6272809	N	METHOD	300.0	III
29-Apr-2011	SL-014-SA8N-SB-4.0-5.0	6272809	N	METHOD	314.0	III
29-Apr-2011	SL-014-SA8N-SB-4.0-5.0	6272809	N	METHOD	7471A	III
29-Apr-2011	SL-014-SA8N-SB-4.0-5.0	6272809	N	METHOD	8015M	III
29-Apr-2011	TB-042911	6272819	TB	5030B	8015M	III
29-Apr-2011	TB-042911	6272819	TB	5030B	8260B	III
29-Apr-2011	TB-042911	6272819	TB	5030B	8260B SIM	III
29-Apr-2011	SL-017-SA8N-SB-4.0-5.0	6272810	N	3050B	6010B	III
29-Apr-2011	SL-017-SA8N-SB-4.0-5.0	6272810	N	3050B	6020	III
29-Apr-2011	SL-017-SA8N-SB-4.0-5.0	6272810	N	3060A	7199	III
29-Apr-2011	SL-017-SA8N-SB-4.0-5.0	6272810	N	3550B	8082	III
29-Apr-2011	SL-017-SA8N-SB-4.0-5.0	6272810	N	3550B	8270C	III
29-Apr-2011	SL-017-SA8N-SB-4.0-5.0	6272810	N	3550B	8270C SIM	III
29-Apr-2011	SL-017-SA8N-SB-4.0-5.0	6272810	N	5035	8260B	III
29-Apr-2011	SL-017-SA8N-SB-4.0-5.0	6272810	N	5035	8260B SIM	III
29-Apr-2011	SL-017-SA8N-SB-4.0-5.0	6272810	N	METHOD	300.0	III
29-Apr-2011	SL-017-SA8N-SB-4.0-5.0	6272810	N	METHOD	314.0	III
29-Apr-2011	SL-017-SA8N-SB-4.0-5.0	6272810	N	METHOD	7471A	III
29-Apr-2011	SL-017-SA8N-SB-4.0-5.0	6272810	N	METHOD	8015M	III
29-Apr-2011	SL-017-SA8N-SB-7.0-8.0	6272811	N	3050B	6010B	III
29-Apr-2011	SL-017-SA8N-SB-7.0-8.0	6272811	N	3050B	6020	III
29-Apr-2011	SL-017-SA8N-SB-7.0-8.0	6272811	N	3060A	7199	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
29-Apr-2011	SL-017-SA8N-SB-7.0-8.0	6272811	N	3550B	8082	III
29-Apr-2011	SL-017-SA8N-SB-7.0-8.0	6272811	N	3550B	8270C	III
29-Apr-2011	SL-017-SA8N-SB-7.0-8.0	6272811	N	3550B	8270C SIM	III
29-Apr-2011	SL-017-SA8N-SB-7.0-8.0	6272811	N	METHOD	300.0	III
29-Apr-2011	SL-017-SA8N-SB-7.0-8.0	6272811	N	METHOD	314.0	III
29-Apr-2011	SL-017-SA8N-SB-7.0-8.0	6272811	N	METHOD	7471A	III
29-Apr-2011	SL-017-SA8N-SB-7.0-8.0	6272811	N	METHOD	8015M	III

III = EPA Level 3 Data Review
IV = EPA Level 4 Data Validation
N = Normal Sample
FD = Field Duplicate
TB = Trip Blank
FB = Field Blank
MS = Matrix Spike
MSD = Matrix Spike Duplicate

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE140 Laboratory: LL

EDD Filename: PrepDE140_v1 eQAPP Name: CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-049-SA8N-SB-4.0-5.0 *Collected:* 4/29/2011 11:19:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate-NO3	1.5	J	0.90	MDL	1.7	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: DUP06-SA8N-QC-042911 *Collected:* 4/29/2011 9:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	11700		7.35	MDL	24.0	PQL	mg/Kg	J	E
SODIUM	108	J	44.7	MDL	120	PQL	mg/Kg	J	Z
TIN	3.28	J	1.20	MDL	12.0	PQL	mg/Kg	U	B

Sample ID: SL-013-SA8N-SB-2.0-3.0 *Collected:* 4/29/2011 12:06:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.02	J	1.01	MDL	5.68	PQL	mg/Kg	J	Z
CALCIUM	13500		6.97	MDL	22.7	PQL	mg/Kg	J	E
TIN	2.80	J	1.14	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	4.32	J	0.955	MDL	5.68	PQL	mg/Kg	J	Z

Sample ID: SL-014-SA8N-SB-4.0-5.0 *Collected:* 4/29/2011 2:12:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	1.60	J	0.999	MDL	5.62	PQL	mg/Kg	J	Z
CALCIUM	6750		6.88	MDL	22.5	PQL	mg/Kg	J	E
TIN	3.05	J	1.12	MDL	11.2	PQL	mg/Kg	U	B
Zirconium	4.05	J	0.943	MDL	5.62	PQL	mg/Kg	J	Z

Sample ID: SL-017-SA8N-SB-4.0-5.0 *Collected:* 4/29/2011 3:22:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	1.04	J	0.986	MDL	5.54	PQL	mg/Kg	J	Z
CALCIUM	4210		6.79	MDL	22.2	PQL	mg/Kg	J	E
TIN	3.03	J	1.11	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	4.11	J	0.931	MDL	5.54	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE140 **Laboratory:** LL

EDD Filename: PrepDE140_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-017-SA8N-SB-7.0-8.0 ***Collected:*** 4/29/2011 3:25:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	4270		7.02	MDL	22.9	PQL	mg/Kg	J	E
TIN	3.04	J	1.15	MDL	11.5	PQL	mg/Kg	U	B
Zirconium	4.16	J	0.962	MDL	5.73	PQL	mg/Kg	J	Z

Sample ID: SL-040-SA8N-SB-4.0-5.0 ***Collected:*** 4/29/2011 9:15:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	10400		7.27	MDL	23.7	PQL	mg/Kg	J	E
SODIUM	113	J	44.2	MDL	119	PQL	mg/Kg	J	Z
TIN	2.98	J	1.19	MDL	11.9	PQL	mg/Kg	U	B

Sample ID: SL-040-SA8N-SB-9.0-10.0 ***Collected:*** 4/29/2011 9:24:00 ***Analysis Type:*** REA ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	98600		36.8	MDL	120	PQL	mg/Kg	J	E

Sample ID: SL-040-SA8N-SB-9.0-10.0 ***Collected:*** 4/29/2011 9:24:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	2.80	J	1.20	MDL	12.0	PQL	mg/Kg	U	B
Zirconium	5.49	J	1.01	MDL	6.00	PQL	mg/Kg	J	Z

Sample ID: SL-049-SA8N-SB-4.0-5.0 ***Collected:*** 4/29/2011 11:19:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	1.05	J	0.990	MDL	5.56	PQL	mg/Kg	J	Z
CALCIUM	4550		6.82	MDL	22.2	PQL	mg/Kg	J	E
TIN	3.01	J	1.11	MDL	11.1	PQL	mg/Kg	U	B

Sample ID: SL-049-SA8N-SB-8.0-9.0 ***Collected:*** 4/29/2011 11:24:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	31200		7.21	MDL	23.5	PQL	mg/Kg	J	E
TIN	3.39	J	1.18	MDL	11.8	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE140 **Laboratory:** LL

EDD Filename: PrepDE140_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: DUP06-SA8N-QC-042911 ***Collected:*** 4/29/2011 9:30:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.222	J	0.0470	MDL	0.470	PQL	mg/Kg	J	Z, Q

Sample ID: DUP06-SA8N-QC-042911 ***Collected:*** 4/29/2011 9:30:00 ***Analysis Type:*** REA5 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	138		0.127	MDL	0.470	PQL	mg/Kg	J	A

Sample ID: DUP06-SA8N-QC-042911 ***Collected:*** 4/29/2011 9:30:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.240		0.0705	MDL	0.235	PQL	mg/Kg	J	Q
BERYLLIUM	0.845		0.0188	MDL	0.118	PQL	mg/Kg	J	Q
CHROMIUM	34.0		0.141	MDL	0.470	PQL	mg/Kg	J	A
COBALT	12.0		0.0235	MDL	0.118	PQL	mg/Kg	J	A
COPPER	19.0		0.0776	MDL	0.470	PQL	mg/Kg	J	A
LEAD	10.4		0.0122	MDL	0.235	PQL	mg/Kg	J	A
NICKEL	22.6		0.118	MDL	0.470	PQL	mg/Kg	J	A
SILVER	0.0453	J	0.0141	MDL	0.118	PQL	mg/Kg	J	Z
VANADIUM	63.5		0.0259	MDL	0.118	PQL	mg/Kg	J	A
ZINC	75.8		0.658	MDL	3.53	PQL	mg/Kg	J	A

Sample ID: SL-013-SA8N-SB-2.0-3.0 ***Collected:*** 4/29/2011 12:06:00 ***Analysis Type:*** REA2 ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ZINC	198		1.58	MDL	8.44	PQL	mg/Kg	J	A

Sample ID: SL-013-SA8N-SB-2.0-3.0 ***Collected:*** 4/29/2011 12:06:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0867	J	0.0450	MDL	0.450	PQL	mg/Kg	J	Z, Q

Sample ID: SL-013-SA8N-SB-2.0-3.0 ***Collected:*** 4/29/2011 12:06:00 ***Analysis Type:*** REA5 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	83.5		0.122	MDL	0.450	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE140 **Laboratory:** LL

EDD Filename: PrepDE140_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-013-SA8N-SB-2.0-3.0 ***Collected:*** 4/29/2011 12:06:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.195	J	0.0675	MDL	0.225	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.633		0.0180	MDL	0.113	PQL	mg/Kg	J	Q
CHROMIUM	23.2		0.135	MDL	0.450	PQL	mg/Kg	J	A
COBALT	8.54		0.0225	MDL	0.113	PQL	mg/Kg	J	A
COPPER	12.5		0.0743	MDL	0.450	PQL	mg/Kg	J	A
LEAD	7.62		0.0117	MDL	0.225	PQL	mg/Kg	J	A
NICKEL	16.4		0.113	MDL	0.450	PQL	mg/Kg	J	A
SILVER	0.0412	J	0.0135	MDL	0.113	PQL	mg/Kg	J	Z
VANADIUM	43.5		0.0248	MDL	0.113	PQL	mg/Kg	J	A

Sample ID: SL-014-SA8N-SB-4.0-5.0 ***Collected:*** 4/29/2011 2:12:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0449	U	0.0449	MDL	0.449	PQL	mg/Kg	UJ	Q

Sample ID: SL-014-SA8N-SB-4.0-5.0 ***Collected:*** 4/29/2011 2:12:00 ***Analysis Type:*** REA5 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	60.9		0.121	MDL	0.449	PQL	mg/Kg	J	A

Sample ID: SL-014-SA8N-SB-4.0-5.0 ***Collected:*** 4/29/2011 2:12:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.100	J	0.0674	MDL	0.225	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.517		0.0180	MDL	0.112	PQL	mg/Kg	J	Q
CADMIUM	0.0862	J	0.0449	MDL	0.112	PQL	mg/Kg	J	Z
CHROMIUM	20.7		0.135	MDL	0.449	PQL	mg/Kg	J	A
COBALT	5.78		0.0225	MDL	0.112	PQL	mg/Kg	J	A
COPPER	9.47		0.0741	MDL	0.449	PQL	mg/Kg	J	A
LEAD	5.08		0.0117	MDL	0.225	PQL	mg/Kg	J	A
NICKEL	15.3		0.112	MDL	0.449	PQL	mg/Kg	J	A
SILVER	0.0247	J	0.0135	MDL	0.112	PQL	mg/Kg	J	Z
VANADIUM	33.8		0.0247	MDL	0.112	PQL	mg/Kg	J	A
ZINC	47.4		0.629	MDL	3.37	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: PrepDE140_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-017-SA8N-SB-4.0-5.0 **Collected:** 4/29/2011 3:22:00 **Analysis Type:** REA3 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0768	J	0.0439	MDL	0.439	PQL	mg/Kg	J	Z, Q

Sample ID: SL-017-SA8N-SB-4.0-5.0 **Collected:** 4/29/2011 3:22:00 **Analysis Type:** REA5 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	78.5		0.118	MDL	0.439	PQL	mg/Kg	J	A

Sample ID: SL-017-SA8N-SB-4.0-5.0 **Collected:** 4/29/2011 3:22:00 **Analysis Type:** RES **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.160	J	0.0658	MDL	0.219	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.761		0.0176	MDL	0.110	PQL	mg/Kg	J	Q
CADMIUM	0.0449	J	0.0439	MDL	0.110	PQL	mg/Kg	J	Z
CHROMIUM	23.7		0.132	MDL	0.439	PQL	mg/Kg	J	A
COBALT	9.04		0.0219	MDL	0.110	PQL	mg/Kg	J	A
COPPER	11.8		0.0724	MDL	0.439	PQL	mg/Kg	J	A
LEAD	6.94		0.0114	MDL	0.219	PQL	mg/Kg	J	A
NICKEL	15.4		0.110	MDL	0.439	PQL	mg/Kg	J	A
SILVER	0.0255	J	0.0132	MDL	0.110	PQL	mg/Kg	J	Z
VANADIUM	45.5		0.0241	MDL	0.110	PQL	mg/Kg	J	A
ZINC	55.7		0.614	MDL	3.29	PQL	mg/Kg	J	A

Sample ID: SL-017-SA8N-SB-7.0-8.0 **Collected:** 4/29/2011 3:25:00 **Analysis Type:** REA3 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0458	U	0.0458	MDL	0.458	PQL	mg/Kg	UJ	Q

Sample ID: SL-017-SA8N-SB-7.0-8.0 **Collected:** 4/29/2011 3:25:00 **Analysis Type:** REA5 **Dilution:** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	89.6		0.124	MDL	0.458	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: PrepDE140_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-017-SA8N-SB-7.0-8.0 *Collected:* 4/29/2011 3:25:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.146	J	0.0687	MDL	0.229	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.643		0.0183	MDL	0.115	PQL	mg/Kg	J	Q
CHROMIUM	22.5		0.137	MDL	0.458	PQL	mg/Kg	J	A
COBALT	10.1		0.0229	MDL	0.115	PQL	mg/Kg	J	A
COPPER	10.2		0.0756	MDL	0.458	PQL	mg/Kg	J	A
LEAD	6.46		0.0119	MDL	0.229	PQL	mg/Kg	J	A
NICKEL	16.6		0.115	MDL	0.458	PQL	mg/Kg	J	A
SILVER	0.0200	J	0.0137	MDL	0.115	PQL	mg/Kg	J	Z
VANADIUM	47.8		0.0252	MDL	0.115	PQL	mg/Kg	J	A
ZINC	54.4		0.641	MDL	3.44	PQL	mg/Kg	J	A

Sample ID: SL-040-SA8N-SB-4.0-5.0 *Collected:* 4/29/2011 9:15:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.251	J	0.0470	MDL	0.470	PQL	mg/Kg	J	Z, Q

Sample ID: SL-040-SA8N-SB-4.0-5.0 *Collected:* 4/29/2011 9:15:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	130		0.127	MDL	0.470	PQL	mg/Kg	J	A

Sample ID: SL-040-SA8N-SB-4.0-5.0 *Collected:* 4/29/2011 9:15:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.303		0.0704	MDL	0.235	PQL	mg/Kg	J	Q
BERYLLIUM	0.800		0.0188	MDL	0.117	PQL	mg/Kg	J	Q
CHROMIUM	31.4		0.141	MDL	0.470	PQL	mg/Kg	J	A
COBALT	10.7		0.0235	MDL	0.117	PQL	mg/Kg	J	A
COPPER	16.5		0.0775	MDL	0.470	PQL	mg/Kg	J	A
LEAD	9.31		0.0122	MDL	0.235	PQL	mg/Kg	J	A
NICKEL	20.9		0.117	MDL	0.470	PQL	mg/Kg	J	A
SILVER	0.0278	J	0.0141	MDL	0.117	PQL	mg/Kg	J	Z
VANADIUM	55.6		0.0258	MDL	0.117	PQL	mg/Kg	J	A
ZINC	73.1		0.658	MDL	3.52	PQL	mg/Kg	J	A

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE140 **Laboratory:** LL

EDD Filename: PrepDE140_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-040-SA8N-SB-9.0-10.0 ***Collected:*** 4/29/2011 9:24:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.126	J	0.0485	MDL	0.485	PQL	mg/Kg	J	Z, Q

Sample ID: SL-040-SA8N-SB-9.0-10.0 ***Collected:*** 4/29/2011 9:24:00 ***Analysis Type:*** REA5 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	108		0.131	MDL	0.485	PQL	mg/Kg	J	A

Sample ID: SL-040-SA8N-SB-9.0-10.0 ***Collected:*** 4/29/2011 9:24:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.232	J	0.0727	MDL	0.242	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.765		0.0194	MDL	0.121	PQL	mg/Kg	J	Q
CHROMIUM	31.8		0.145	MDL	0.485	PQL	mg/Kg	J	A
COBALT	8.69		0.0242	MDL	0.121	PQL	mg/Kg	J	A
COPPER	15.4		0.0800	MDL	0.485	PQL	mg/Kg	J	A
LEAD	9.16		0.0126	MDL	0.242	PQL	mg/Kg	J	A
NICKEL	17.1		0.121	MDL	0.485	PQL	mg/Kg	J	A
SILVER	0.0388	J	0.0145	MDL	0.121	PQL	mg/Kg	J	Z
VANADIUM	62.3		0.0267	MDL	0.121	PQL	mg/Kg	J	A
ZINC	61.9		0.679	MDL	3.64	PQL	mg/Kg	J	A

Sample ID: SL-049-SA8N-SB-4.0-5.0 ***Collected:*** 4/29/2011 11:19:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0501	J	0.0441	MDL	0.441	PQL	mg/Kg	J	Z, Q

Sample ID: SL-049-SA8N-SB-4.0-5.0 ***Collected:*** 4/29/2011 11:19:00 ***Analysis Type:*** REA5 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	76.6		0.119	MDL	0.441	PQL	mg/Kg	J	A

Sample ID: SL-049-SA8N-SB-4.0-5.0 ***Collected:*** 4/29/2011 11:19:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.246		0.0661	MDL	0.220	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE140 **Laboratory:** LL

EDD Filename: PrepDE140_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-049-SA8N-SB-4.0-5.0 ***Collected:*** 4/29/2011 11:19:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.775		0.0176	MDL	0.110	PQL	mg/Kg	J	Q
CHROMIUM	26.4		0.132	MDL	0.441	PQL	mg/Kg	J	A
COBALT	9.88		0.0220	MDL	0.110	PQL	mg/Kg	J	A
COPPER	12.6		0.0727	MDL	0.441	PQL	mg/Kg	J	A
LEAD	6.59		0.0115	MDL	0.220	PQL	mg/Kg	J	A
NICKEL	18.1		0.110	MDL	0.441	PQL	mg/Kg	J	A
SILVER	0.0602	J	0.0132	MDL	0.110	PQL	mg/Kg	J	Z
VANADIUM	57.0		0.0242	MDL	0.110	PQL	mg/Kg	J	A
ZINC	56.0		0.617	MDL	3.30	PQL	mg/Kg	J	A

Sample ID: SL-049-SA8N-SB-8.0-9.0 ***Collected:*** 4/29/2011 11:24:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0760	J	0.0457	MDL	0.457	PQL	mg/Kg	J	Z, Q

Sample ID: SL-049-SA8N-SB-8.0-9.0 ***Collected:*** 4/29/2011 11:24:00 ***Analysis Type:*** REA5 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	70.2		0.123	MDL	0.457	PQL	mg/Kg	J	A

Sample ID: SL-049-SA8N-SB-8.0-9.0 ***Collected:*** 4/29/2011 11:24:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.103	J	0.0685	MDL	0.228	PQL	mg/Kg	J	Z, Q
BERYLLIUM	0.914		0.0183	MDL	0.114	PQL	mg/Kg	J	Q
CADMIUM	0.0995	J	0.0457	MDL	0.114	PQL	mg/Kg	J	Z
CHROMIUM	25.2		0.137	MDL	0.457	PQL	mg/Kg	J	A
COBALT	6.92		0.0228	MDL	0.114	PQL	mg/Kg	J	A
COPPER	17.7		0.0754	MDL	0.457	PQL	mg/Kg	J	A
LEAD	7.21		0.0119	MDL	0.228	PQL	mg/Kg	J	A
NICKEL	18.1		0.114	MDL	0.457	PQL	mg/Kg	J	A
SILVER	0.101	J	0.0137	MDL	0.114	PQL	mg/Kg	J	Z
VANADIUM	44.2		0.0251	MDL	0.114	PQL	mg/Kg	J	A
ZINC	62.7		0.640	MDL	3.43	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: PrepDE140_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: DUP06-SA8N-QC-042911 *Collected:* 4/29/2011 9:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.47	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-013-SA8N-SB-2.0-3.0 *Collected:* 4/29/2011 12:06:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.32	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-017-SA8N-SB-7.0-8.0 *Collected:* 4/29/2011 3:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.38	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-040-SA8N-SB-4.0-5.0 *Collected:* 4/29/2011 9:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.56	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-040-SA8N-SB-9.0-10.0 *Collected:* 4/29/2011 9:24:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.37	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-049-SA8N-SB-4.0-5.0 *Collected:* 4/29/2011 11:19:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.34	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: SL-049-SA8N-SB-8.0-9.0 *Collected:* 4/29/2011 11:24:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0196	J	0.0032	MDL	0.112	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: PrepDE140_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: DUP06-SA8N-QC-042911 *Collected:* 4/29/2011 9:30:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	0.48	U	0.48	MDL	1.4	PQL	mg/Kg	UJ	FD
EFH (C30-C40)	0.96	J	0.48	MDL	1.4	PQL	mg/Kg	J	Z, FD

Sample ID: SL-040-SA8N-SB-4.0-5.0 *Collected:* 4/29/2011 9:15:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	1.7		0.48	MDL	1.4	PQL	mg/Kg	J	Q, Q, FD
EFH (C30-C40)	4.0		0.48	MDL	1.4	PQL	mg/Kg	J	Q, Q, Q, FD

Sample ID: SL-040-SA8N-SB-9.0-10.0 *Collected:* 4/29/2011 9:24:00 *Analysis Type:* RES *Dilution:* 22.89

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	0.2	J	0.2	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-049-SA8N-SB-4.0-5.0 *Collected:* 4/29/2011 11:19:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.52	J	0.45	MDL	1.3	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: SL-013-SA8N-SB-2.0-3.0 *Collected:* 4/29/2011 12:06:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	0.62	J	0.44	MDL	1.9	PQL	ug/Kg	J	Z, S

Sample ID: SL-017-SA8N-SB-7.0-8.0 *Collected:* 4/29/2011 3:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	1.2	J	0.39	MDL	2.0	PQL	ug/Kg	J	Z, S
AROCLOR 1260	0.72	J	0.46	MDL	2.0	PQL	ug/Kg	J	Z, S

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: PrepDE140_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-049-SA8N-SB-4.0-5.0 *Collected:* 4/29/2011 11:19:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	20	J	19	MDL	370	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: DUP06-SA8N-QC-042911 *Collected:* 4/29/2011 9:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.97	J	0.80	MDL	2.0	PQL	ug/Kg	J	Z, FD
CHRYSENE	0.74	J	0.40	MDL	2.0	PQL	ug/Kg	J	Z, FD
Di-n-octylphthalate	9.5	J	7.2	MDL	22	PQL	ug/Kg	J	Z
NAPHTHALENE	0.83	J	0.80	MDL	2.0	PQL	ug/Kg	J	Z, FD

Sample ID: SL-013-SA8N-SB-2.0-3.0 *Collected:* 4/29/2011 12:06:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.89	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
CHRYSENE	0.64	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z
Di-n-octylphthalate	8.7	J	6.8	MDL	20	PQL	ug/Kg	J	Z

Sample ID: SL-014-SA8N-SB-4.0-5.0 *Collected:* 4/29/2011 2:12:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Di-n-octylphthalate	8.8	J	6.9	MDL	21	PQL	ug/Kg	J	Z

Sample ID: SL-017-SA8N-SB-4.0-5.0 *Collected:* 4/29/2011 3:22:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	15	J	6.8	MDL	20	PQL	ug/Kg	U	B
Di-n-octylphthalate	11	J	6.8	MDL	20	PQL	ug/Kg	J	Z

Sample ID: SL-017-SA8N-SB-7.0-8.0 *Collected:* 4/29/2011 3:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Di-n-octylphthalate	9.2	J	7.0	MDL	21	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE140 **Laboratory:** LL

EDD Filename: PrepDE140_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: SL-040-SA8N-SB-4.0-5.0 *Collected:* 4/29/2011 9:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.79	U	0.79	MDL	2.0	PQL	ug/Kg	UJ	FD
CHRYSENE	0.39	U	0.39	MDL	2.0	PQL	ug/Kg	UJ	FD
Di-n-octylphthalate	9.1	J	7.1	MDL	21	PQL	ug/Kg	J	Z
NAPHTHALENE	0.79	U	0.79	MDL	2.0	PQL	ug/Kg	UJ	FD

Sample ID: SL-040-SA8N-SB-9.0-10.0 *Collected:* 4/29/2011 9:24:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	1.6	J	0.81	MDL	2.0	PQL	ug/Kg	J	Z
CHRYSENE	1.4	J	0.40	MDL	2.0	PQL	ug/Kg	J	Z
Di-n-octylphthalate	9.3	J	7.3	MDL	22	PQL	ug/Kg	J	Z

Sample ID: SL-049-SA8N-SB-4.0-5.0 *Collected:* 4/29/2011 11:19:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Di-n-octylphthalate	8.6	J	6.7	MDL	20	PQL	ug/Kg	J	Z

Sample ID: SL-049-SA8N-SB-8.0-9.0 *Collected:* 4/29/2011 11:24:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Di-n-octylphthalate	9.2	J	7.1	MDL	21	PQL	ug/Kg	J	Z

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: DUP06-SA8N-QC-042911 *Collected:* 4/29/2011 9:30:00 *Analysis Type:* RES *Dilution:* 0.85

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	7.7	J	6.9	MDL	8.2	PQL	ug/Kg	UJ	B, FD
TOLUENE	0.12	J	0.08	MDL	4.1	PQL	ug/Kg	U	B

Sample ID: SL-013-SA8N-SB-2.0-3.0 *Collected:* 4/29/2011 12:06:00 *Analysis Type:* RES *Dilution:* 0.84

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	7.3	J	6.4	MDL	7.6	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: PrepDE140_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: VOA

Method: 8260B **Matrix: SO**

Sample ID: SL-013-SA8N-SB-2.0-3.0 *Collected:* 4/29/2011 12:06:00 *Analysis Type:* RES *Dilution:* 0.84

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOLUENE	0.10	J	0.08	MDL	3.8	PQL	ug/Kg	U	B

Sample ID: SL-014-SA8N-SB-4.0-5.0 *Collected:* 4/29/2011 2:12:00 *Analysis Type:* RES *Dilution:* 0.81

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOLUENE	0.09	J	0.07	MDL	3.7	PQL	ug/Kg	U	B

Sample ID: SL-017-SA8N-SB-4.0-5.0 *Collected:* 4/29/2011 3:22:00 *Analysis Type:* RES *Dilution:* 0.82

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOLUENE	0.11	J	0.07	MDL	3.7	PQL	ug/Kg	U	B

Sample ID: SL-040-SA8N-SB-4.0-5.0 *Collected:* 4/29/2011 9:15:00 *Analysis Type:* RES *Dilution:* 1.04

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.3	U	8.3	MDL	10	PQL	ug/Kg	UJ	FD
METHYLENE CHLORIDE	14		0.30	MDL	5.0	PQL	ug/Kg	J	Q
TOLUENE	0.11	J	0.1	MDL	5.0	PQL	ug/Kg	U	B

Sample ID: SL-049-SA8N-SB-4.0-5.0 *Collected:* 4/29/2011 11:19:00 *Analysis Type:* RES *Dilution:* 0.84

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	7.2	J	6.3	MDL	7.6	PQL	ug/Kg	U	B
TOLUENE	0.09	J	0.08	MDL	3.8	PQL	ug/Kg	U	B

Sample ID: SL-049-SA8N-SB-8.0-9.0 *Collected:* 4/29/2011 11:24:00 *Analysis Type:* RES *Dilution:* 1.04

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.6	J	8.2	MDL	9.9	PQL	ug/Kg	U	B
TOLUENE	0.15	J	0.1	MDL	4.9	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: PrepDE140_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: PrepDE140_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: PrepDE140_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE140

Method Blank Outlier Report

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: DE140_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P12308AB220919	5/7/2011 9:19:00 AM	CALCIUM LITHIUM MANGANESE PHOSPHORUS TIN	10.6 mg/Kg 0.43 mg/Kg 0.224 mg/Kg 1.05 mg/Kg 1.32 mg/Kg	DUP06-SA8N-QC-042911 SL-013-SA8N-SB-2.0-3.0 SL-014-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-7.0-8.0 SL-040-SA8N-SB-4.0-5.0 SL-040-SA8N-SB-9.0-10.0 SL-049-SA8N-SB-4.0-5.0 SL-049-SA8N-SB-8.0-9.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP06-SA8N-QC-042911(RES)	TIN	3.28 mg/Kg	3.28U mg/Kg
SL-013-SA8N-SB-2.0-3.0(RES)	TIN	2.80 mg/Kg	2.80U mg/Kg
SL-014-SA8N-SB-4.0-5.0(RES)	TIN	3.05 mg/Kg	3.05U mg/Kg
SL-017-SA8N-SB-4.0-5.0(RES)	TIN	3.03 mg/Kg	3.03U mg/Kg
SL-017-SA8N-SB-7.0-8.0(RES)	TIN	3.04 mg/Kg	3.04U mg/Kg
SL-040-SA8N-SB-4.0-5.0(RES)	TIN	2.98 mg/Kg	2.98U mg/Kg
SL-040-SA8N-SB-9.0-10.0(RES)	TIN	2.80 mg/Kg	2.80U mg/Kg
SL-049-SA8N-SB-4.0-5.0(RES)	TIN	3.01 mg/Kg	3.01U mg/Kg
SL-049-SA8N-SB-8.0-9.0(RES)	TIN	3.39 mg/Kg	3.39U mg/Kg

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P12326AB221311A	5/5/2011 1:11:00 PM	COPPER VANADIUM	0.142 mg/Kg 0.0876 mg/Kg	DUP06-SA8N-QC-042911 SL-013-SA8N-SB-2.0-3.0 SL-014-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-7.0-8.0 SL-040-SA8N-SB-4.0-5.0 SL-040-SA8N-SB-9.0-10.0 SL-049-SA8N-SB-4.0-5.0 SL-049-SA8N-SB-8.0-9.0

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB42B211316A	5/3/2011 1:16:00 PM	ACETONE METHYLENE CHLORIDE TOLUENE	9.9 ug/Kg 0.60 ug/Kg 0.15 ug/Kg	DUP06-SA8N-QC-042911 SL-013-SA8N-SB-2.0-3.0 SL-014-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-4.0-5.0 SL-040-SA8N-SB-4.0-5.0 SL-049-SA8N-SB-4.0-5.0 SL-049-SA8N-SB-8.0-9.0

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Method Blank Outlier Report

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: DE140_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP06-SA8N-QC-042911(RES)	ACETONE	7.7 ug/Kg	8.2U ug/Kg
DUP06-SA8N-QC-042911(RES)	TOLUENE	0.12 ug/Kg	4.1U ug/Kg
SL-013-SA8N-SB-2.0-3.0(RES)	ACETONE	7.3 ug/Kg	7.6U ug/Kg
SL-013-SA8N-SB-2.0-3.0(RES)	TOLUENE	0.10 ug/Kg	3.8U ug/Kg
SL-014-SA8N-SB-4.0-5.0(RES)	TOLUENE	0.09 ug/Kg	3.7U ug/Kg
SL-017-SA8N-SB-4.0-5.0(RES)	TOLUENE	0.11 ug/Kg	3.7U ug/Kg
SL-040-SA8N-SB-4.0-5.0(RES)	TOLUENE	0.11 ug/Kg	5.0U ug/Kg
SL-049-SA8N-SB-4.0-5.0(RES)	ACETONE	7.2 ug/Kg	7.6U ug/Kg
SL-049-SA8N-SB-4.0-5.0(RES)	TOLUENE	0.09 ug/Kg	3.8U ug/Kg
SL-049-SA8N-SB-8.0-9.0(RES)	ACETONE	8.6 ug/Kg	9.9U ug/Kg
SL-049-SA8N-SB-8.0-9.0(RES)	TOLUENE	0.15 ug/Kg	4.9U ug/Kg

Method: **8270C SIM**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKLB12B260646	5/18/2011 6:46:00 AM	BIS(2-ETHYLHEXYL)PHTHALATE	8.8 ug/Kg	DUP06-SA8N-QC-042911 SL-013-SA8N-SB-2.0-3.0 SL-014-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-7.0-8.0 SL-040-SA8N-SB-4.0-5.0 SL-040-SA8N-SB-9.0-10.0 SL-049-SA8N-SB-4.0-5.0 SL-049-SA8N-SB-8.0-9.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-017-SA8N-SB-4.0-5.0(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	15 ug/Kg	20U ug/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: DE140_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-013-SA8N-SB-2.0-3.0MSD (SL-013-SA8N-SB-2.0-3.0)	DIETHYLENE GLYCOL	-	-	59.00-109.00	32 (20.00)	DIETHYLENE GLYCOL	J (all detects)
SL-040-SA8N-SB-4.0-5.0MS SL-040-SA8N-SB-4.0-5.0MSD (SL-040-SA8N-SB-4.0-5.0)	EFH (C21-C30)	299	-	49.00-123.00	102 (20.00)	EFH (C21-C30)	J(all detects)
SL-040-SA8N-SB-4.0-5.0MS SL-040-SA8N-SB-4.0-5.0MSD (SL-040-SA8N-SB-4.0-5.0)	EFH (C30-C40)	393	-9	49.00-123.00	124 (20.00)	EFH (C30-C40)	J(all detects) R(all non-detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-040-SA8N-SB-4.0-5.0MSD (DUP06-SA8N-QC-042911 SL-013-SA8N-SB-2.0-3.0 SL-014-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-7.0-8.0 SL-040-SA8N-SB-4.0-5.0 SL-040-SA8N-SB-9.0-10.0 SL-049-SA8N-SB-4.0-5.0 SL-049-SA8N-SB-8.0-9.0)	VANADIUM	-	126	75.00-125.00	-	VANADIUM	No Qual >4x
SL-040-SA8N-SB-4.0-5.0MS SL-040-SA8N-SB-4.0-5.0MSD (DUP06-SA8N-QC-042911 SL-013-SA8N-SB-2.0-3.0 SL-014-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-7.0-8.0 SL-040-SA8N-SB-4.0-5.0 SL-040-SA8N-SB-9.0-10.0 SL-049-SA8N-SB-4.0-5.0 SL-049-SA8N-SB-8.0-9.0)	ANTIMONY BERYLLIUM ZINC	43 73 35	43 - -	75.00-125.00 75.00-125.00 75.00-125.00	- - -	ANTIMONY BERYLLIUM ZINC	J(all detects) UJ(all non-detects) Zn No Qual >4x
SL-040-SA8N-SB-4.0-5.0MS (DUP06-SA8N-QC-042911 SL-013-SA8N-SB-2.0-3.0 SL-014-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-7.0-8.0 SL-040-SA8N-SB-4.0-5.0 SL-040-SA8N-SB-9.0-10.0 SL-049-SA8N-SB-4.0-5.0 SL-049-SA8N-SB-8.0-9.0)	SELENIUM	74	-	75.00-125.00	-	SELENIUM	J(all detects) UJ(all non-detects)

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: DE140_v1 **eQAPP Name: CDM_SSFL_110509**

***Method:* 6010B**
***Matrix:* SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-040-SA8N-SB-4.0-5.0MS SL-040-SA8N-SB-4.0-5.0MSD (DUP06-SA8N-QC-042911 SL-013-SA8N-SB-2.0-3.0 SL-014-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-7.0-8.0 SL-040-SA8N-SB-4.0-5.0 SL-040-SA8N-SB-9.0-10.0 SL-049-SA8N-SB-4.0-5.0 SL-049-SA8N-SB-8.0-9.0)	ALUMINUM CALCIUM IRON MAGNESIUM POTASSIUM TITANIUM	3417 998 1649 390 144 554	2582 577 704 243 137 434	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - - - -	ALUMINUM CALCIUM IRON MAGNESIUM POTASSIUM TITANIUM	No Qual >4x
SL-040-SA8N-SB-4.0-5.0MS (DUP06-SA8N-QC-042911 SL-013-SA8N-SB-2.0-3.0 SL-014-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-7.0-8.0 SL-040-SA8N-SB-4.0-5.0 SL-040-SA8N-SB-9.0-10.0 SL-049-SA8N-SB-4.0-5.0 SL-049-SA8N-SB-8.0-9.0)	MANGANESE	49	-	75.00-125.00	-	MANGANESE	No Qual >4x

***Method:* 8270C**
***Matrix:* SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-040-SA8N-SB-4.0-5.0MSD (SL-040-SA8N-SB-4.0-5.0)	BENZIDINE	-	-	35.00-141.00	40 (30.00)	BENZIDINE	J(all detects)

***Method:* 8260B**
***Matrix:* SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-040-SA8N-SB-4.0-5.0MS SL-040-SA8N-SB-4.0-5.0MSD (SL-040-SA8N-SB-4.0-5.0)	METHYLENE CHLORIDE	254	258	61.00-141.00	-	METHYLENE CHLORIDE	J(all detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: DE140_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-040-SA8N-SB-4.0-5.0DUP (DUP06-SA8N-QC-042911 SL-013-SA8N-SB-2.0-3.0 SL-014-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-7.0-8.0 SL-040-SA8N-SB-4.0-5.0 SL-040-SA8N-SB-9.0-10.0 SL-049-SA8N-SB-4.0-5.0 SL-049-SA8N-SB-8.0-9.0)	CALCIUM	27	20.00	J (all detects) UJ (all non-detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-040-SA8N-SB-4.0-5.0DUP (DUP06-SA8N-QC-042911 SL-013-SA8N-SB-2.0-3.0 SL-014-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-7.0-8.0 SL-040-SA8N-SB-4.0-5.0 SL-040-SA8N-SB-9.0-10.0 SL-049-SA8N-SB-4.0-5.0 SL-049-SA8N-SB-8.0-9.0)	ANTIMONY	30	20.00	No Qual, OK by difference
	SELENIUM	36	20.00	
	SILVER	69	20.00	
	THALLIUM	25	20.00	

Method: 7199
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-040-SA8N-SB-4.0-5.0DUP (DUP06-SA8N-QC-042911 SL-013-SA8N-SB-2.0-3.0 SL-014-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-7.0-8.0 SL-040-SA8N-SB-4.0-5.0 SL-040-SA8N-SB-9.0-10.0 SL-049-SA8N-SB-4.0-5.0 SL-049-SA8N-SB-8.0-9.0)	HEXAVALENT CHROMIUM	29	20.00	No Qual, OK by difference

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: DE140_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8082
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11233AY240336A (DUP06-SA8N-QC-042911 SL-013-SA8N-SB-2.0-3.0 SL-014-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-7.0-8.0 SL-040-SA8N-SB-4.0-5.0 SL-040-SA8N-SB-9.0-10.0 SL-049-SA8N-SB-4.0-5.0 SL-049-SA8N-SB-8.0-9.0)	Aroclor 5442	-	115	36.00-106.00	-	Aroclor 5432 Aroclor 5442 Aroclor 5460	J (all detects)

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P4LALCSQ261312 (DUP06-SA8N-QC-042911 SL-013-SA8N-SB-2.0-3.0 SL-014-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-4.0-5.0 SL-017-SA8N-SB-7.0-8.0 SL-040-SA8N-SB-4.0-5.0 SL-040-SA8N-SB-9.0-10.0 SL-049-SA8N-SB-4.0-5.0)	Butylbenzylphthalate	117	-	75.00-115.00	-	Butylbenzylphthalate	J(all detects)
P4LZLCSQ262246 (SL-049-SA8N-SB-8.0-9.0)	BIS(2-CHLOROETHYL) ETHER	105	-	70.00-104.00	-	BIS(2-CHLOROETHYL) ETHER	J(all detects)

Surrogate Outlier Report

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: DE140_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8082**
Matrix: **SO**

Sample ID	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-013-SA8N-SB-2.0-3.0	DECACHLOROBIPHENYL TETRACHLORO-M-XYLENE	135 149	45.00-120.00 53.00-139.00	All Target Analytes	J (all detects)
SL-014-SA8N-SB-4.0-5.0	DECACHLOROBIPHENYL	128	45.00-120.00	All Target Analytes	J(all detects)
SL-017-SA8N-SB-7.0-8.0	DECACHLOROBIPHENYL TETRACHLORO-M-XYLENE	176 169	45.00-120.00 53.00-139.00	All Target Analytes	J(all detects)
SL-040-SA8N-SB-9.0-10.0	DECACHLOROBIPHENYL TETRACHLORO-M-XYLENE	171 177	45.00-120.00 53.00-139.00	All Target Analytes	J(all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: DE140_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-040-SA8N-SB-4.0-5.0	DUP06-SA8N-QC-042911			
MOISTURE	16.5	16.6	1		No Qualifiers Applied

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-040-SA8N-SB-4.0-5.0	DUP06-SA8N-QC-042911			
FLUORIDE	1.6	1.7	6	50.00	No Qualifiers Applied

Method: 6010B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-040-SA8N-SB-4.0-5.0	DUP06-SA8N-QC-042911			
ALUMINUM	31900	33000	3	50.00	No Qualifiers Applied
BORON	7.56	8.74	14	50.00	
CALCIUM	10400	11700	12	50.00	
IRON	37900	37700	1	50.00	
LITHIUM	28.8	29.1	1	50.00	
MAGNESIUM	7890	8010	2	50.00	
MANGANESE	493	494	0	50.00	
PHOSPHORUS	356	357	0	50.00	
POTASSIUM	5260	5270	0	50.00	
SODIUM	113	108	5	50.00	
STRONTIUM	45.6	47.0	3	50.00	
TIN	2.98	3.28	10	50.00	
TITANIUM	1290	1560	19	50.00	
Zirconium	6.47	7.08	9	50.00	

Method: 6020
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-040-SA8N-SB-4.0-5.0	DUP06-SA8N-QC-042911			
ANTIMONY	0.303	0.240	23	50.00	No Qualifiers Applied
ARSENIC	5.99	6.52	8	50.00	
BARIUM	130	138	6	50.00	
BERYLLIUM	0.800	0.845	5	50.00	
CADMIUM	0.279	0.281	1	50.00	
CHROMIUM	31.4	34.0	8	50.00	
COBALT	10.7	12.0	11	50.00	
COPPER	16.5	19.0	14	50.00	
LEAD	9.31	10.4	11	50.00	
MOLYBDENUM	0.359	0.505	34	50.00	
NICKEL	20.9	22.6	8	50.00	
SELENIUM	0.251	0.222	12	50.00	
SILVER	0.0278	0.0453	48	50.00	
THALLIUM	0.306	0.402	27	50.00	
VANADIUM	55.6	63.5	13	50.00	
ZINC	73.1	75.8	4	50.00	

Field Duplicate RPD Report

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: DE140_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7199
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-040-SA8N-SB-4.0-5.0	DUP06-SA8N-QC-042911			
HEXAVALENT CHROMIUM	0.56	0.47	17	50.00	No Qualifiers Applied

Method: 8015M
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-040-SA8N-SB-4.0-5.0	DUP06-SA8N-QC-042911			
EFH (C21-C30)	1.7	1.4 U	200	50.00	J(all detects)
EFH (C30-C40)	4.0	0.96	123	50.00	UJ(all non-detects)

Method: 8260B
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-040-SA8N-SB-4.0-5.0	DUP06-SA8N-QC-042911			
METHYLENE CHLORIDE	14	22	44	50.00	No Qualifiers Applied
TOLUENE	0.11	0.12	9	50.00	
ACETONE	10 U	7.7	200	50.00	J(all detects) UJ(all non-detects)

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-040-SA8N-SB-4.0-5.0	DUP06-SA8N-QC-042911			
Di-n-octylphthalate	9.1	9.5	4	50.00	No Qualifiers Applied
BENZO(B)FLUORANTHENE	2.0 U	0.97	200	50.00	J(all detects) UJ(all non-detects)
CHRYSENE	2.0 U	0.74	200	50.00	
NAPHTHALENE	2.0 U	0.83	200	50.00	

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-040-SA8N-SB-4.0-5.0	DUP06-SA8N-QC-042911			
PH	7.89	7.73	2	50.00	No Qualifiers Applied

Method: ASTM D1498
Matrix: SO

Analyte	Concentration (mV)		Sample RPD	eQAPP RPD	Flag
	SL-040-SA8N-SB-4.0-5.0	DUP06-SA8N-QC-042911			
Oxidation Reduction Potential	412	396	4		No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: DE140_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-049-SA8N-SB-4.0-5.0	Nitrate-NO3	J	1.5	1.7	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP06-SA8N-QC-042911	SODIUM	J	108	120	PQL	mg/Kg	J (all detects)
	TIN	J	3.28	12.0	PQL	mg/Kg	
SL-013-SA8N-SB-2.0-3.0	BORON	J	3.02	5.68	PQL	mg/Kg	J (all detects)
	TIN	J	2.80	11.4	PQL	mg/Kg	
	Zirconium	J	4.32	5.68	PQL	mg/Kg	
SL-014-SA8N-SB-4.0-5.0	BORON	J	1.60	5.62	PQL	mg/Kg	J (all detects)
	TIN	J	3.05	11.2	PQL	mg/Kg	
	Zirconium	J	4.05	5.62	PQL	mg/Kg	
SL-017-SA8N-SB-4.0-5.0	BORON	J	1.04	5.54	PQL	mg/Kg	J (all detects)
	TIN	J	3.03	11.1	PQL	mg/Kg	
	Zirconium	J	4.11	5.54	PQL	mg/Kg	
SL-017-SA8N-SB-7.0-8.0	TIN	J	3.04	11.5	PQL	mg/Kg	J (all detects)
	Zirconium	J	4.16	5.73	PQL	mg/Kg	
SL-040-SA8N-SB-4.0-5.0	SODIUM	J	113	119	PQL	mg/Kg	J (all detects)
	TIN	J	2.98	11.9	PQL	mg/Kg	
SL-040-SA8N-SB-9.0-10.0	TIN	J	2.80	12.0	PQL	mg/Kg	J (all detects)
	Zirconium	J	5.49	6.00	PQL	mg/Kg	
SL-049-SA8N-SB-4.0-5.0	BORON	J	1.05	5.56	PQL	mg/Kg	J (all detects)
	TIN	J	3.01	11.1	PQL	mg/Kg	
SL-049-SA8N-SB-8.0-9.0	TIN	J	3.39	11.8	PQL	mg/Kg	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP06-SA8N-QC-042911	SELENIUM	J	0.222	0.470	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0453	0.118	PQL	mg/Kg	
SL-013-SA8N-SB-2.0-3.0	ANTIMONY	J	0.195	0.225	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0867	0.450	PQL	mg/Kg	
	SILVER	J	0.0412	0.113	PQL	mg/Kg	
SL-014-SA8N-SB-4.0-5.0	ANTIMONY	J	0.100	0.225	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.0862	0.112	PQL	mg/Kg	
	SILVER	J	0.0247	0.112	PQL	mg/Kg	
SL-017-SA8N-SB-4.0-5.0	ANTIMONY	J	0.160	0.219	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.0449	0.110	PQL	mg/Kg	
	SELENIUM	J	0.0768	0.439	PQL	mg/Kg	
	SILVER	J	0.0255	0.110	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: DE140_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-017-SA8N-SB-7.0-8.0	ANTIMONY	J	0.146	0.229	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0200	0.115	PQL	mg/Kg	
SL-040-SA8N-SB-4.0-5.0	SELENIUM	J	0.251	0.470	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0278	0.117	PQL	mg/Kg	
SL-040-SA8N-SB-9.0-10.0	ANTIMONY	J	0.232	0.242	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.126	0.485	PQL	mg/Kg	
	SILVER	J	0.0388	0.121	PQL	mg/Kg	
SL-049-SA8N-SB-4.0-5.0	SELENIUM	J	0.0501	0.441	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0602	0.110	PQL	mg/Kg	
SL-049-SA8N-SB-8.0-9.0	ANTIMONY	J	0.103	0.228	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.0995	0.114	PQL	mg/Kg	
	SELENIUM	J	0.0760	0.457	PQL	mg/Kg	
	SILVER	J	0.101	0.114	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP06-SA8N-QC-042911	HEXAVALENT CHROMIUM	J	0.47	1.2	PQL	mg/Kg	J (all detects)
SL-013-SA8N-SB-2.0-3.0	HEXAVALENT CHROMIUM	J	0.32	1.1	PQL	mg/Kg	J (all detects)
SL-017-SA8N-SB-7.0-8.0	HEXAVALENT CHROMIUM	J	0.38	1.2	PQL	mg/Kg	J (all detects)
SL-040-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.56	1.2	PQL	mg/Kg	J (all detects)
SL-040-SA8N-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.37	1.2	PQL	mg/Kg	J (all detects)
SL-049-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.34	1.1	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-049-SA8N-SB-8.0-9.0	MERCURY	J	0.0196	0.112	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP06-SA8N-QC-042911	EFH (C30-C40)	J	0.96	1.4	PQL	mg/Kg	J (all detects)
SL-040-SA8N-SB-9.0-10.0	GASOLINE RANGE ORGANICS (C5-C12)	J	0.2	1.1	PQL	mg/Kg	J (all detects)
SL-049-SA8N-SB-4.0-5.0	EFH (C30-C40)	J	0.52	1.3	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: DE140_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-013-SA8N-SB-2.0-3.0	AROCLOR 1260	J	0.62	1.9	PQL	ug/Kg	J (all detects)
SL-017-SA8N-SB-7.0-8.0	AROCLOR 1254 AROCLOR 1260	J J	1.2 0.72	2.0 2.0	PQL PQL	ug/Kg ug/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP06-SA8N-QC-042911	ACETONE TOLUENE	J J	7.7 0.12	8.2 4.1	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-013-SA8N-SB-2.0-3.0	ACETONE TOLUENE	J J	7.3 0.10	7.6 3.8	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-014-SA8N-SB-4.0-5.0	TOLUENE	J	0.09	3.7	PQL	ug/Kg	J (all detects)
SL-017-SA8N-SB-4.0-5.0	TOLUENE	J	0.11	3.7	PQL	ug/Kg	J (all detects)
SL-040-SA8N-SB-4.0-5.0	TOLUENE	J	0.11	5.0	PQL	ug/Kg	J (all detects)
SL-049-SA8N-SB-4.0-5.0	ACETONE TOLUENE	J J	7.2 0.09	7.6 3.8	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-049-SA8N-SB-8.0-9.0	ACETONE TOLUENE	J J	8.6 0.15	9.9 4.9	PQL PQL	ug/Kg ug/Kg	J (all detects)

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-049-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	20	370	PQL	ug/Kg	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP06-SA8N-QC-042911	BENZO(B)FLUORANTHENE CHRYSENE Di-n-octylphthalate NAPHTHALENE	J J J J	0.97 0.74 9.5 0.83	2.0 2.0 22 2.0	PQL PQL PQL PQL	ug/Kg ug/Kg ug/Kg ug/Kg	J (all detects)
SL-013-SA8N-SB-2.0-3.0	BENZO(B)FLUORANTHENE CHRYSENE Di-n-octylphthalate	J J J	0.89 0.64 8.7	1.9 1.9 20	PQL PQL PQL	ug/Kg ug/Kg ug/Kg	J (all detects)
SL-014-SA8N-SB-4.0-5.0	Di-n-octylphthalate	J	8.8	21	PQL	ug/Kg	J (all detects)
SL-017-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE Di-n-octylphthalate	J J	15 11	20 20	PQL PQL	ug/Kg ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE140 **Laboratory: LL**

EDD Filename: DE140_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8270C SIM**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-017-SA8N-SB-7.0-8.0	Di-n-octylphthalate	J	9.2	21	PQL	ug/Kg	J (all detects)
SL-040-SA8N-SB-4.0-5.0	Di-n-octylphthalate	J	9.1	21	PQL	ug/Kg	J (all detects)
SL-040-SA8N-SB-9.0-10.0	BENZO(B)FLUORANTHENE CHRYSENE Di-n-octylphthalate	J J J	1.6 1.4 9.3	2.0 2.0 22	PQL PQL PQL	ug/Kg ug/Kg ug/Kg	J (all detects)
SL-049-SA8N-SB-4.0-5.0	Di-n-octylphthalate	J	8.6	20	PQL	ug/Kg	J (all detects)
SL-049-SA8N-SB-8.0-9.0	Di-n-octylphthalate	J	9.2	21	PQL	ug/Kg	J (all detects)

LDC #: 26275E4 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/28/11
SDG #: DE140 ADR Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: W
2nd Reviewer: C

METHOD: Metals (EPA SW 846 Method 6010B/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 4/29/11
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	A	No Sample qual by reB/ccB
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	SW	Al, Ca, Fe, Mg, Mn, K, Ti, V, Zn 75%
VII.	Duplicate Sample Analysis	SW	Sb, Se, Ag, Tl <5%,
VIII.	Laboratory Control Samples (LCS)	N A	SRM
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	Ba, Cr, Co, Cu, Pb, Ni, V, Zn, J/UJ
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: soil

1	DUP06-SA8N-QC-042911	11	SL-040-SA8N-SB-4.0-5.0MSD	21		31	
2	SL-013-SA8N-SB-2.0-3.0	12	SL-040-SA8N-SB-4.0-5.0DUP	22		32	
3	SL-014-SA8N-SB-4.0-5.0	13		23		33	
4	SL-017-SA8N-SB-4.0-5.0	14		24		34	
5	SL-017-SA8N-SB-7.0-5.0	15		25		35	
6	SL-040-SA8N-SB-4.0-5.0	16		26		36	
7	SL-040-SA8N-SB-9.0-10.0	17		27		37	
8	SL-049-SA8N-SB-4.0-5.0	18		28		38	
9	SL-049-SA8N-SB-8.0-9.0	19		29		39	
10	SL-040-SA8N-SB-4.0-5.0MS	20		30		40	

Notes:

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: DE140
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6272812BKG Matrix Spike Lab Sample ID: 6272813MS Matrix Spike Duplicate Lab Sample ID: 6272814MSD
% Solids for Sample: 83.5
Batch Id(s): P12308A, P12326A, P12311A

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	Control Limit RPD	M
Aluminum		31926.3935		40030.4286		38049.0816		237.1495	237.1495	MG/KG	3417		2582		5			20	P
Antimony	121	0.3032		0.9121		0.9210		1.4229	1.4371	MG/KG	43	N	43	N	1		75 - 125	20	MS
Arsenic	75	5.9904		7.8283		8.2515		2.3715	2.3952	MG/KG	77		94		5		75 - 125	20	MS
Barium	137	129.6701		140.3451		144.0000		11.8575	11.9760	MG/KG	90		120		3			20	MS
Beryllium	9	0.7998		1.4943		1.6067		0.9486	0.9581	MG/KG	73	N	84		7		75 - 125	20	MS
Boron		7.5556		251.1863		245.9572		237.1495	237.1495	MG/KG	103		101		2		84 - 115	20	P
Cadmium	111	0.2787		1.2258		1.2956		1.1857	1.1976	MG/KG	80		85		6		75 - 125	20	MS
Calcium		10357.5147		15089.4219		13096.5364		474.2989	474.2989	MG/KG	998		577		14			20	P
Chromium	52	31.3725		41.7146		41.8443		11.8575	11.9760	MG/KG	87		87		0		75 - 125	20	MS
Cobalt	59	10.7244		62.2280		68.8144		59.2874	59.8802	MG/KG	87		97		10		75 - 125	20	MS
Copper	63	16.5293		26.4422		29.4132		11.8575	11.9760	MG/KG	84		108		11		75 - 125	20	MS
Iron		37910.1204		39865.5244		38744.3292		118.5747	118.5747	MG/KG	1649		704		3			20	P
Lead	208	9.3108		12.5025		12.9413		3.5572	3.5928	MG/KG	90		101		3		75 - 125	20	MS
Lithium		28.7686		150.7820		147.7062		118.5747	118.5747	MG/KG	103		100		2		82 - 114	20	P
Magnesium		7891.2468		8816.1582		8468.4200		237.1495	237.1495	MG/KG	390		243		4			20	P
Manganese		493.3100		522.2577		543.3794		59.2874	59.2874	MG/KG	49		84		4			20	P
Mercury		0.0035	U	0.1877		0.1770		0.1910	0.1885	MG/KG	98		94		6		80 - 120	20	CV
Molybdenum	98	0.3593		10.4156		11.8156		11.8575	11.9760	MG/KG	85		96		13		75 - 125	20	MS
Nickel	60	20.9205		30.3077		35.0659		11.8575	11.9760	MG/KG	79		118		15		75 - 125	20	MS
Phosphorus		356.0882		458.0909		470.4476		118.5747	118.5747	MG/KG	86		96		3		75 - 125	20	P
Potassium		5256.4534		6966.7457		6877.6819		1185.7473	1185.7473	MG/KG	144		137		1			20	P
Selenium	78	0.2513	B	2.0044		2.3840		2.3715	2.3952	MG/KG	74	N	89		17		75 - 125	20	MS
Silver	107	0.0278	B	10.1334		11.5329		11.8575	11.9760	MG/KG	85		96		13		75 - 125	20	MS
Sodium		112.8867	B	1233.5649		1216.2744		1185.7473	1185.7473	MG/KG	95		93		1		75 - 125	20	P
Strontium		45.5540		170.0978		164.7110		118.5747	118.5747	MG/KG	105		100		3		75 - 115	20	P
Thallium	203	0.3057		0.7055		0.8204		0.4743	0.4790	MG/KG	84		107		15		75 - 125	20	MS
Tin		2.9845	B	429.6899		428.2801		474.2989	474.2989	MG/KG	90		90		0		80 - 110	20	P
Titanium		1287.2912		1944.2343		1801.8047		118.5747	118.5747	MG/KG	554		434		8			20	P
Vanadium	51	55.5595		69.9591		70.6108		11.8575	11.9760	MG/KG	121		126		1			20	MS
Zinc	66	73.0774		77.2396		87.5928		11.8575	11.9760	MG/KG	35		121		13			20	MS
Zirconium	92	6.4730		119.5684		116.9870		118.5747	118.5747	MG/KG	95		93		2		75 - 125	20	P

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: DE140
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6272812BKG
% Solids for Duplicate: 83.6
Batch ID(s): P12308A, P12326A, P12311A
Concentration Units: MG/KG

Duplicate Lab Sample ID: 6272815DUP
% Solids for Sample: 83.5

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			31926.3935		32758.6979		3		P
Antimony	121	0.2	0.3032		0.2231	B	30		MS
Arsenic	75		5.9904		6.8171		13		MS
Barium	137		129.6701		131.2298		1		MS
Beryllium	9		0.7998		0.8321		4		MS
Boron		5.9	7.5556		8.6521		14		P
Cadmium	111	0.1	0.2787		0.3047		9		MS
Calcium			10357.5147		13568.4642		27	*	P
Chromium	52		31.3725		32.8190		5		MS
Cobalt	59		10.7244		11.3795		6		MS
Copper	63		16.5293		17.6923		7		MS
Iron			37910.1204		36348.7026		4		P
Lead	208		9.3108		9.7190		4		MS
Lithium			28.7686		29.3296		2		P
Magnesium			7891.2468		7890.7655		0		P
Manganese			493.3100		479.3660		3		P
Mercury			0.0035	U	0.0034	U			CV
Molybdenum	98	0.1	0.3593		0.4058		12		MS
Nickel	60		20.9205		23.5606		12		MS
Phosphorus			356.0882		336.7125		6		P
Potassium			5256.4534		5153.8476		2		P
Selenium	78		0.2513	B	0.1746	B	36		MS
Silver	107		0.0278	B	0.0569	B	69		MS
Sodium			112.8867	B	110.8794	B	2		P
Strontium			45.5540		47.7797		5		P
Thallium	203	0.1	0.3057		0.3938		25		MS
Tin			2.9845	B	3.1009	B	4		P
Titanium			1287.2912		1433.8946		11		P
Vanadium	51		55.5595		59.4427		7		MS
Zinc	66		73.0774		70.9811		3		MS
Zirconium		5.9	6.4730		7.3465		13		P

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
* = Duplicate Out of Spec

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: DE140
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6272812BKG Serial Dilution Lab Sample ID: 6272812L
Batch ID(s): P12308A, P12326A
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		269251.2400		278909.7000		4		P
Antimony	121	1.2910		1.5000	U	100		MS
Arsenic	75	25.5100		37.8200		48		MS
Barium	137	552.2000		698.5000		26	E	MS
Beryllium	9	3.4060		5.1850		52		MS
Boron		63.7200		60.7000	B	5		P
Cadmium	111	1.1870		1.0000	U	100		MS
Calcium		87350.1000		93049.1500		7		P
Chromium	52	133.6000		188.4500		41	E	MS
Cobalt	59	45.6700		59.8000		31	E	MS
Copper	63	70.3900		98.7000		40	E	MS
Iron		63943.0000		65229.5500		2		P
Lead	208	39.6500		52.0000		31	E	MS
Lithium		242.6200		259.8000		7		P
Magnesium		66550.8300		69785.7000		5		P
Manganese		4160.3300		4401.3000		6		P
Molybdenum	98	1.5300		2.7575		80		MS
Nickel	60	89.0900		104.6500		17	E	MS
Phosphorus		3003.0700		3068.8500		2		P
Potassium		44330.3000		46714.0000		5		P
Selenium	78	1.0700	B	1.0000	U	100		MS
Silver	107	0.1185	B	0.3000	U	100		MS
Sodium		952.0300	B	1865.0000	U	100		P
Strontium		384.1800		394.8000		3		P
Thallium	203	1.3020		1.8195	B	40		MS
Tin		25.1700	B	50.0000	U	100		P
Titanium		10856.3700		10301.7500		5		P
Vanadium	51	236.6000		343.6500		45	E	MS
Zinc	66	311.2000		406.0000		30	E	MS
Zirconium		54.5900		45.2500	B	17		P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
	FLAGS:
	E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

SAMPLE DELIVERY GROUP

DE141

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
02-May-2011	TB-050211	6273948	TB	5030B	8015M	III
02-May-2011	TB-050211	6273948	TB	5030B	8260B	III
02-May-2011	TB-050211	6273948	TB	5030B	8260B SIM	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0	6273941	N	3050B	6010B	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0	6273941	N	3050B	6020	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0	6273941	N	3060A	7199	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0	6273941	N	3546	1625C	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0	6273941	N	3550B	8015B	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0	6273941	N	3550B	8015M	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0	6273941	N	3550B	8082	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0	6273941	N	3550B	8270C	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0	6273941	N	3550B	8270C SIM	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0	6273941	N	5035	8015M	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0	6273941	N	5035	8260B	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0	6273941	N	5035	8260B SIM	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0	6273941	N	8330	8330A	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0	6273941	N	METHOD	300.0	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0	6273941	N	METHOD	314.0	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0	6273941	N	METHOD	7471A	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0	6273941	N	METHOD	8015B	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0	6273941	N	METHOD	8015M	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0	6273941	N	METHOD	8315A	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0	6273941	N	METHOD	9012B	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0DUP	P273941D271511B	DUP	METHOD	314.0	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0MSD	P273941M240218A	MSD	8330	8330A	III
02-May-2011	SL-012-SA8N-SB-4.0-5.0MS	P273941R240136A	MS	8330	8330A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
02-May-2011	SL-012-SA8N-SB-4.0-5.0MS	P273941R271533B	MS	METHOD	314.0	III
02-May-2011	SL-050-SA8N-SB-4.0-5.0	6273944	N	3050B	6010B	III
02-May-2011	SL-050-SA8N-SB-4.0-5.0	6273944	N	3050B	6020	III
02-May-2011	SL-050-SA8N-SB-4.0-5.0	6273944	N	3060A	7199	III
02-May-2011	SL-050-SA8N-SB-4.0-5.0	6273944	N	3550B	8082	III
02-May-2011	SL-050-SA8N-SB-4.0-5.0	6273944	N	3550B	8270C	III
02-May-2011	SL-050-SA8N-SB-4.0-5.0	6273944	N	3550B	8270C SIM	III
02-May-2011	SL-050-SA8N-SB-4.0-5.0	6273944	N	5035	8260B	III
02-May-2011	SL-050-SA8N-SB-4.0-5.0	6273944	N	5035	8260B SIM	III
02-May-2011	SL-050-SA8N-SB-4.0-5.0	6273944	N	METHOD	300.0	III
02-May-2011	SL-050-SA8N-SB-4.0-5.0	6273944	N	METHOD	314.0	III
02-May-2011	SL-050-SA8N-SB-4.0-5.0	6273944	N	METHOD	7471A	III
02-May-2011	SL-050-SA8N-SB-4.0-5.0	6273944	N	METHOD	8015M	III
02-May-2011	SL-050-SA8N-SB-9.0-10	6273945	N	3050B	6010B	III
02-May-2011	SL-050-SA8N-SB-9.0-10	6273945	N	3050B	6020	III
02-May-2011	SL-050-SA8N-SB-9.0-10	6273945	N	3060A	7199	III
02-May-2011	SL-050-SA8N-SB-9.0-10	6273945	N	3550B	8082	III
02-May-2011	SL-050-SA8N-SB-9.0-10	6273945	N	3550B	8270C	III
02-May-2011	SL-050-SA8N-SB-9.0-10	6273945	N	3550B	8270C SIM	III
02-May-2011	SL-050-SA8N-SB-9.0-10	6273945	N	METHOD	300.0	III
02-May-2011	SL-050-SA8N-SB-9.0-10	6273945	N	METHOD	314.0	III
02-May-2011	SL-050-SA8N-SB-9.0-10	6273945	N	METHOD	7471A	III
02-May-2011	SL-050-SA8N-SB-9.0-10	6273945	N	METHOD	8015M	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0	6273942	N	3050B	6010B	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0	6273942	N	3050B	6020	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0	6273942	N	3060A	7199	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
02-May-2011	SL-022-SA8N-SB-4.0-5.0	6273942	N	3546	1625C	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0	6273942	N	3550B	8015B	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0	6273942	N	3550B	8015M	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0	6273942	N	3550B	8082	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0	6273942	N	3550B	8270C	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0	6273942	N	3550B	8270C SIM	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0	6273942	N	5035	8015M	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0	6273942	N	5035	8260B	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0	6273942	N	5035	8260B SIM	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0	6273942	N	8330	8330A	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0	6273942	N	METHOD	300.0	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0	6273942	N	METHOD	314.0	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0	6273942	N	METHOD	6850	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0	6273942	N	METHOD	7471A	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0	6273942	N	METHOD	8015B	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0	6273942	N	METHOD	8015M	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0	6273942	N	METHOD	8315A	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0	6273942	N	METHOD	9012B	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0MSD	P273942M241225A	MSD	METHOD	6850	III
02-May-2011	SL-022-SA8N-SB-4.0-5.0MS	P273942R241218A	MS	METHOD	6850	III
02-May-2011	SL-022-SA8N-SB-9.0-10.0	6273943	N	3050B	6010B	III
02-May-2011	SL-022-SA8N-SB-9.0-10.0	6273943	N	3050B	6020	III
02-May-2011	SL-022-SA8N-SB-9.0-10.0	6273943	N	3060A	7199	III
02-May-2011	SL-022-SA8N-SB-9.0-10.0	6273943	N	3546	1625C	III
02-May-2011	SL-022-SA8N-SB-9.0-10.0	6273943	N	3550B	8015B	III
02-May-2011	SL-022-SA8N-SB-9.0-10.0	6273943	N	3550B	8015M	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
02-May-2011	SL-022-SA8N-SB-9.0-10.0	6273943	N	3550B	8082	III
02-May-2011	SL-022-SA8N-SB-9.0-10.0	6273943	N	3550B	8270C	III
02-May-2011	SL-022-SA8N-SB-9.0-10.0	6273943	N	3550B	8270C SIM	III
02-May-2011	SL-022-SA8N-SB-9.0-10.0	6273943	N	5035	8015M	III
02-May-2011	SL-022-SA8N-SB-9.0-10.0	6273943	N	5035	8260B	III
02-May-2011	SL-022-SA8N-SB-9.0-10.0	6273943	N	5035	8260B SIM	III
02-May-2011	SL-022-SA8N-SB-9.0-10.0	6273943	N	8330	8330A	III
02-May-2011	SL-022-SA8N-SB-9.0-10.0	6273943	N	METHOD	300.0	III
02-May-2011	SL-022-SA8N-SB-9.0-10.0	6273943	N	METHOD	314.0	III
02-May-2011	SL-022-SA8N-SB-9.0-10.0	6273943	N	METHOD	7471A	III
02-May-2011	SL-022-SA8N-SB-9.0-10.0	6273943	N	METHOD	8015B	III
02-May-2011	SL-022-SA8N-SB-9.0-10.0	6273943	N	METHOD	8015M	III
02-May-2011	SL-022-SA8N-SB-9.0-10.0	6273943	N	METHOD	8315A	III
02-May-2011	SL-022-SA8N-SB-9.0-10.0	6273943	N	METHOD	9012B	III
02-May-2011	SL-023-SA8N-SB-4.0-5.0	6273946	N	3050B	6010B	III
02-May-2011	SL-023-SA8N-SB-4.0-5.0	6273946	N	3050B	6020	III
02-May-2011	SL-023-SA8N-SB-4.0-5.0	6273946	N	3060A	7199	III
02-May-2011	SL-023-SA8N-SB-4.0-5.0	6273946	N	3550B	8082	III
02-May-2011	SL-023-SA8N-SB-4.0-5.0	6273946	N	3550B	8270C	III
02-May-2011	SL-023-SA8N-SB-4.0-5.0	6273946	N	3550B	8270C SIM	III
02-May-2011	SL-023-SA8N-SB-4.0-5.0	6273946	N	5035	8260B	III
02-May-2011	SL-023-SA8N-SB-4.0-5.0	6273946	N	5035	8260B SIM	III
02-May-2011	SL-023-SA8N-SB-4.0-5.0	6273946	N	METHOD	300.0	III
02-May-2011	SL-023-SA8N-SB-4.0-5.0	6273946	N	METHOD	314.0	III
02-May-2011	SL-023-SA8N-SB-4.0-5.0	6273946	N	METHOD	7471A	III
02-May-2011	SL-023-SA8N-SB-9.0-10.0	6273947	N	3050B	6010B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
02-May-2011	SL-023-SA8N-SB-9.0-10.0	6273947	N	3050B	6020	III
02-May-2011	SL-023-SA8N-SB-9.0-10.0	6273947	N	3060A	7199	III
02-May-2011	SL-023-SA8N-SB-9.0-10.0	6273947	N	3550B	8082	III
02-May-2011	SL-023-SA8N-SB-9.0-10.0	6273947	N	3550B	8270C	III
02-May-2011	SL-023-SA8N-SB-9.0-10.0	6273947	N	3550B	8270C SIM	III
02-May-2011	SL-023-SA8N-SB-9.0-10.0	6273947	N	METHOD	300.0	III
02-May-2011	SL-023-SA8N-SB-9.0-10.0	6273947	N	METHOD	314.0	III
02-May-2011	SL-023-SA8N-SB-9.0-10.0	6273947	N	METHOD	7471A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE141 Laboratory: LL

EDD Filename: PrepDE141_v1 eQAPP Name: CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-022-SA8N-SB-9.0-10.0 *Collected:* 5/2/2011 12:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate-NO3	1.6	J	0.95	MDL	1.8	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-012-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 9:20:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	2.89	J	1.03	MDL	5.81	PQL	mg/Kg	J	Z
CALCIUM	4650		7.12	MDL	23.2	PQL	mg/Kg	J	A
MANGANESE	490		0.0906	MDL	0.581	PQL	mg/Kg	J	E
TIN	3.07	J	1.16	MDL	11.6	PQL	mg/Kg	U	B

Sample ID: SL-022-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 12:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.04	J	1.03	MDL	5.78	PQL	mg/Kg	J	Z
CALCIUM	6930		7.08	MDL	23.1	PQL	mg/Kg	J	A
MANGANESE	485		0.0901	MDL	0.578	PQL	mg/Kg	J	E
TIN	3.02	J	1.16	MDL	11.6	PQL	mg/Kg	U	B

Sample ID: SL-022-SA8N-SB-9.0-10.0 *Collected:* 5/2/2011 12:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.08	J	1.05	MDL	5.90	PQL	mg/Kg	J	Z
CALCIUM	8910		7.23	MDL	23.6	PQL	mg/Kg	J	A
MANGANESE	561		0.0920	MDL	0.590	PQL	mg/Kg	J	E
TIN	2.96	J	1.18	MDL	11.8	PQL	mg/Kg	U	B

Sample ID: SL-023-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 3:45:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.08	J	1.01	MDL	5.69	PQL	mg/Kg	J	Z
CALCIUM	11200		6.98	MDL	22.8	PQL	mg/Kg	J	A
MANGANESE	458		0.0888	MDL	0.569	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE141 **Laboratory: LL**

EDD Filename: PrepDE141_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-023-SA8N-SB-4.0-5.0 ***Collected:*** 5/2/2011 3:45:00 PM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	112	J	42.4	MDL	114	PQL	mg/Kg	J	Z
TIN	2.93	J	1.14	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	5.48	J	0.956	MDL	5.69	PQL	mg/Kg	J	Z

Sample ID: SL-023-SA8N-SB-9.0-10.0 ***Collected:*** 5/2/2011 3:50:00 PM ***Analysis Type:*** REA ***Dilution:*** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	141000		36.3	MDL	119	PQL	mg/Kg	J	A

Sample ID: SL-023-SA8N-SB-9.0-10.0 ***Collected:*** 5/2/2011 3:50:00 PM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	305		0.0925	MDL	0.593	PQL	mg/Kg	J	E
TIN	2.65	J	1.19	MDL	11.9	PQL	mg/Kg	U	B
Zirconium	5.66	J	0.996	MDL	5.93	PQL	mg/Kg	J	Z

Sample ID: SL-050-SA8N-SB-4.0-5.0 ***Collected:*** 5/2/2011 10:45:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	4800		7.01	MDL	22.9	PQL	mg/Kg	J	A
MANGANESE	338		0.0892	MDL	0.572	PQL	mg/Kg	J	E
TIN	3.03	J	1.14	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	4.72	J	0.960	MDL	5.72	PQL	mg/Kg	J	Z

Sample ID: SL-050-SA8N-SB-9.0-10 ***Collected:*** 5/2/2011 10:50:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	5470		7.21	MDL	23.5	PQL	mg/Kg	J	A
MANGANESE	366		0.0917	MDL	0.588	PQL	mg/Kg	J	E
TIN	3.08	J	1.18	MDL	11.8	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE141 **Laboratory: LL**

EDD Filename: PrepDE141_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: **SL-012-SA8N-SB-4.0-5.0** ***Collected:*** **5/2/2011 9:20:00 AM** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.117	J	0.0474	MDL	0.118	PQL	mg/Kg	J	Z, E

Sample ID: **SL-012-SA8N-SB-4.0-5.0** ***Collected:*** **5/2/2011 9:20:00 AM** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.196	J	0.0474	MDL	0.474	PQL	mg/Kg	U	B

Sample ID: **SL-012-SA8N-SB-4.0-5.0** ***Collected:*** **5/2/2011 9:20:00 AM** ***Analysis Type:*** **REA4** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.544		0.0592	MDL	0.118	PQL	mg/Kg	J	E

Sample ID: **SL-012-SA8N-SB-4.0-5.0** ***Collected:*** **5/2/2011 9:20:00 AM** ***Analysis Type:*** **REA5** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	149		0.128	MDL	0.474	PQL	mg/Kg	J	E, A

Sample ID: **SL-012-SA8N-SB-4.0-5.0** ***Collected:*** **5/2/2011 9:20:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.236	J	0.0711	MDL	0.237	PQL	mg/Kg	J	Z, Q
ARSENIC	7.00		0.0948	MDL	0.474	PQL	mg/Kg	J	Q, Q
BERYLLIUM	0.997		0.0190	MDL	0.118	PQL	mg/Kg	J	Q, E
CHROMIUM	31.7		0.142	MDL	0.474	PQL	mg/Kg	J	Q, A
COBALT	9.63		0.0237	MDL	0.118	PQL	mg/Kg	J	E, A
COPPER	16.3		0.0782	MDL	0.474	PQL	mg/Kg	J	Q, A
LEAD	10.0		0.0123	MDL	0.237	PQL	mg/Kg	J	Q, A
NICKEL	21.7		0.118	MDL	0.474	PQL	mg/Kg	J	Q, A
SILVER	0.0809	J	0.0142	MDL	0.118	PQL	mg/Kg	J	Z
VANADIUM	54.5		0.0261	MDL	0.118	PQL	mg/Kg	J	E, A
ZINC	64.4		0.664	MDL	3.55	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE141 **Laboratory: LL**

EDD Filename: PrepDE141_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-022-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 12:10:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.263		0.0453	MDL	0.113	PQL	mg/Kg	J	E

Sample ID: SL-022-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 12:10:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.112	J	0.0453	MDL	0.453	PQL	mg/Kg	U	B

Sample ID: SL-022-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 12:10:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.486		0.0566	MDL	0.113	PQL	mg/Kg	J	E

Sample ID: SL-022-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 12:10:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	146		0.122	MDL	0.453	PQL	mg/Kg	J	E, A

Sample ID: SL-022-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 12:10:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.242		0.0680	MDL	0.227	PQL	mg/Kg	J	Q
ARSENIC	6.78		0.0906	MDL	0.453	PQL	mg/Kg	J	Q, Q
BERYLLIUM	0.875		0.0181	MDL	0.113	PQL	mg/Kg	J	Q, E
CHROMIUM	33.8		0.136	MDL	0.453	PQL	mg/Kg	J	Q, A
COBALT	11.9		0.0227	MDL	0.113	PQL	mg/Kg	J	E, A
COPPER	16.8		0.0748	MDL	0.453	PQL	mg/Kg	J	Q, A
LEAD	10.3		0.0118	MDL	0.227	PQL	mg/Kg	J	Q, A
NICKEL	22.4		0.113	MDL	0.453	PQL	mg/Kg	J	Q, A
SILVER	0.0550	J	0.0136	MDL	0.113	PQL	mg/Kg	J	Z
VANADIUM	58.4		0.0249	MDL	0.113	PQL	mg/Kg	J	E, A
ZINC	69.8		0.634	MDL	3.40	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE141 **Laboratory:** LL

EDD Filename: PrepDE141_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-022-SA8N-SB-9.0-10.0 ***Collected:*** 5/2/2011 12:15:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.344		0.0477	MDL	0.119	PQL	mg/Kg	J	E

Sample ID: SL-022-SA8N-SB-9.0-10.0 ***Collected:*** 5/2/2011 12:15:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0701	J	0.0477	MDL	0.477	PQL	mg/Kg	U	B

Sample ID: SL-022-SA8N-SB-9.0-10.0 ***Collected:*** 5/2/2011 12:15:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.421		0.0596	MDL	0.119	PQL	mg/Kg	J	E

Sample ID: SL-022-SA8N-SB-9.0-10.0 ***Collected:*** 5/2/2011 12:15:00 ***Analysis Type:*** REA5 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	120		0.129	MDL	0.477	PQL	mg/Kg	J	E, A

Sample ID: SL-022-SA8N-SB-9.0-10.0 ***Collected:*** 5/2/2011 12:15:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.257		0.0715	MDL	0.238	PQL	mg/Kg	J	Q
ARSENIC	7.28		0.0954	MDL	0.477	PQL	mg/Kg	J	Q, Q
BERYLLIUM	0.905		0.0191	MDL	0.119	PQL	mg/Kg	J	Q, E
CHROMIUM	32.3		0.143	MDL	0.477	PQL	mg/Kg	J	Q, A
COBALT	12.0		0.0238	MDL	0.119	PQL	mg/Kg	J	E, A
COPPER	17.9		0.0787	MDL	0.477	PQL	mg/Kg	J	Q, A
LEAD	9.22		0.0124	MDL	0.238	PQL	mg/Kg	J	Q, A
NICKEL	27.5		0.119	MDL	0.477	PQL	mg/Kg	J	Q, A
SILVER	0.0596	J	0.0143	MDL	0.119	PQL	mg/Kg	J	Z
VANADIUM	59.1		0.0262	MDL	0.119	PQL	mg/Kg	J	E, A
ZINC	72.9		0.667	MDL	3.58	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE141 **Laboratory:** LL

EDD Filename: PrepDE141_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-023-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 3:45:00 PM *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.260		0.0473	MDL	0.118	PQL	mg/Kg	J	E

Sample ID: SL-023-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 3:45:00 PM *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.143	J	0.0473	MDL	0.473	PQL	mg/Kg	U	B

Sample ID: SL-023-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 3:45:00 PM *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.631		0.0592	MDL	0.118	PQL	mg/Kg	J	E

Sample ID: SL-023-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 3:45:00 PM *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	177		0.128	MDL	0.473	PQL	mg/Kg	J	E, A

Sample ID: SL-023-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 3:45:00 PM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.329		0.0710	MDL	0.237	PQL	mg/Kg	J	Q
ARSENIC	7.90		0.0947	MDL	0.473	PQL	mg/Kg	J	Q, Q
BERYLLIUM	1.02		0.0189	MDL	0.118	PQL	mg/Kg	J	Q, E
CHROMIUM	36.4		0.142	MDL	0.473	PQL	mg/Kg	J	Q, A
COBALT	13.2		0.0237	MDL	0.118	PQL	mg/Kg	J	E, A
COPPER	17.7		0.0781	MDL	0.473	PQL	mg/Kg	J	Q, A
LEAD	11.8		0.0123	MDL	0.237	PQL	mg/Kg	J	Q, A
NICKEL	27.0		0.118	MDL	0.473	PQL	mg/Kg	J	Q, A
SILVER	0.0676	J	0.0142	MDL	0.118	PQL	mg/Kg	J	Z
VANADIUM	63.9		0.0260	MDL	0.118	PQL	mg/Kg	J	E, A
ZINC	74.0		0.663	MDL	3.55	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE141 **Laboratory: LL**

EDD Filename: PrepDE141_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-023-SA8N-SB-9.0-10.0 *Collected:* 5/2/2011 3:50:00 PM *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.270		0.0470	MDL	0.117	PQL	mg/Kg	J	E

Sample ID: SL-023-SA8N-SB-9.0-10.0 *Collected:* 5/2/2011 3:50:00 PM *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.145	J	0.0470	MDL	0.470	PQL	mg/Kg	U	B

Sample ID: SL-023-SA8N-SB-9.0-10.0 *Collected:* 5/2/2011 3:50:00 PM *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.358		0.0587	MDL	0.117	PQL	mg/Kg	J	E

Sample ID: SL-023-SA8N-SB-9.0-10.0 *Collected:* 5/2/2011 3:50:00 PM *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	108		0.127	MDL	0.470	PQL	mg/Kg	J	E, A

Sample ID: SL-023-SA8N-SB-9.0-10.0 *Collected:* 5/2/2011 3:50:00 PM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.272		0.0704	MDL	0.235	PQL	mg/Kg	J	Q
ARSENIC	7.30		0.0939	MDL	0.470	PQL	mg/Kg	J	Q, Q
BERYLLIUM	0.923		0.0188	MDL	0.117	PQL	mg/Kg	J	Q, E
CHROMIUM	34.2		0.141	MDL	0.470	PQL	mg/Kg	J	Q, A
COBALT	11.1		0.0235	MDL	0.117	PQL	mg/Kg	J	E, A
COPPER	19.1		0.0775	MDL	0.470	PQL	mg/Kg	J	Q, A
LEAD	10.7		0.0122	MDL	0.235	PQL	mg/Kg	J	Q, A
NICKEL	23.8		0.117	MDL	0.470	PQL	mg/Kg	J	Q, A
SILVER	0.0606	J	0.0141	MDL	0.117	PQL	mg/Kg	J	Z
VANADIUM	61.9		0.0258	MDL	0.117	PQL	mg/Kg	J	E, A
ZINC	67.9		0.657	MDL	3.52	PQL	mg/Kg	J	E

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE141 **Laboratory: LL**

EDD Filename: PrepDE141_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-050-SA8N-SB-4.0-5.0 ***Collected:*** 5/2/2011 10:45:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.194		0.0466	MDL	0.117	PQL	mg/Kg	J	E

Sample ID: SL-050-SA8N-SB-4.0-5.0 ***Collected:*** 5/2/2011 10:45:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.243	J	0.0466	MDL	0.466	PQL	mg/Kg	U	B

Sample ID: SL-050-SA8N-SB-4.0-5.0 ***Collected:*** 5/2/2011 10:45:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.854		0.0583	MDL	0.117	PQL	mg/Kg	J	E

Sample ID: SL-050-SA8N-SB-4.0-5.0 ***Collected:*** 5/2/2011 10:45:00 ***Analysis Type:*** REA5 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	145		0.126	MDL	0.466	PQL	mg/Kg	J	E, A

Sample ID: SL-050-SA8N-SB-4.0-5.0 ***Collected:*** 5/2/2011 10:45:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.304		0.0699	MDL	0.233	PQL	mg/Kg	J	Q
ARSENIC	9.98		0.0933	MDL	0.466	PQL	mg/Kg	J	Q, Q
BERYLLIUM	1.21		0.0187	MDL	0.117	PQL	mg/Kg	J	Q, E
CHROMIUM	38.8		0.140	MDL	0.466	PQL	mg/Kg	J	Q, A
COBALT	14.4		0.0233	MDL	0.117	PQL	mg/Kg	J	E, A
COPPER	19.3		0.0769	MDL	0.466	PQL	mg/Kg	J	Q, A
LEAD	13.5		0.0121	MDL	0.233	PQL	mg/Kg	J	Q, A
NICKEL	29.1		0.117	MDL	0.466	PQL	mg/Kg	J	Q, A
SILVER	0.0910	J	0.0140	MDL	0.117	PQL	mg/Kg	J	Z
VANADIUM	66.8		0.0256	MDL	0.117	PQL	mg/Kg	J	E, A
ZINC	79.1		0.653	MDL	3.50	PQL	mg/Kg	J	E

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE141 **Laboratory:** LL

EDD Filename: PrepDE141_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-050-SA8N-SB-9.0-10 ***Collected:*** 5/2/2011 10:50:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.123		0.0475	MDL	0.119	PQL	mg/Kg	J	E

Sample ID: SL-050-SA8N-SB-9.0-10 ***Collected:*** 5/2/2011 10:50:00 ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0695	J	0.0475	MDL	0.475	PQL	mg/Kg	U	B

Sample ID: SL-050-SA8N-SB-9.0-10 ***Collected:*** 5/2/2011 10:50:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.424		0.0594	MDL	0.119	PQL	mg/Kg	J	E

Sample ID: SL-050-SA8N-SB-9.0-10 ***Collected:*** 5/2/2011 10:50:00 ***Analysis Type:*** REA5 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	101		0.128	MDL	0.475	PQL	mg/Kg	J	E, A

Sample ID: SL-050-SA8N-SB-9.0-10 ***Collected:*** 5/2/2011 10:50:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.113	J	0.0713	MDL	0.238	PQL	mg/Kg	J	Z, Q
ARSENIC	7.85		0.0950	MDL	0.475	PQL	mg/Kg	J	Q, Q
BERYLLIUM	0.746		0.0190	MDL	0.119	PQL	mg/Kg	J	Q, E
CHROMIUM	24.9		0.143	MDL	0.475	PQL	mg/Kg	J	Q, A
COBALT	9.39		0.0238	MDL	0.119	PQL	mg/Kg	J	E, A
COPPER	12.9		0.0784	MDL	0.475	PQL	mg/Kg	J	Q, A
LEAD	6.47		0.0124	MDL	0.238	PQL	mg/Kg	J	Q, A
NICKEL	22.3		0.119	MDL	0.475	PQL	mg/Kg	J	Q, A
SILVER	0.0389	J	0.0143	MDL	0.119	PQL	mg/Kg	J	Z
VANADIUM	49.0		0.0261	MDL	0.119	PQL	mg/Kg	J	E, A
ZINC	63.3		0.665	MDL	3.56	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE141 **Laboratory: LL**

EDD Filename: PrepDE141_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: SL-022-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 12:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.53	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-022-SA8N-SB-9.0-10.0 *Collected:* 5/2/2011 12:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.60	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-023-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 3:45:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.63	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-023-SA8N-SB-9.0-10.0 *Collected:* 5/2/2011 3:50:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.39	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-050-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 10:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.48	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-050-SA8N-SB-9.0-10 *Collected:* 5/2/2011 10:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.62	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-012-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 9:20:00 AM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.65	J	0.47	MDL	1.4	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE141 **Laboratory:** LL

EDD Filename: PrepDE141_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8015M **Matrix:** SO

Sample ID: SL-022-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 12:10:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	0.74	J	0.46	MDL	1.4	PQL	mg/Kg	J	Z

Sample ID: SL-022-SA8N-SB-9.0-10.0 *Collected:* 5/2/2011 12:15:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	0.75	J	0.48	MDL	1.4	PQL	mg/Kg	J	Z
EFH (C30-C40)	1.3	J	0.48	MDL	1.4	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: SL-012-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 9:20:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	7.2	J	7.0	MDL	21	PQL	ug/Kg	U	B
Di-n-octylphthalate	8.9	J	7.0	MDL	21	PQL	ug/Kg	J	Z

Sample ID: SL-022-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 12:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Di-n-octylphthalate	9.0	J	7.0	MDL	21	PQL	ug/Kg	J	Z

Sample ID: SL-022-SA8N-SB-9.0-10.0 *Collected:* 5/2/2011 12:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Di-n-octylphthalate	8.9	J	7.1	MDL	21	PQL	ug/Kg	J	Z

Sample ID: SL-023-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 3:45:00 PM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	13	J	7.1	MDL	21	PQL	ug/Kg	U	B
Di-n-octylphthalate	8.9	J	7.1	MDL	21	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE141 **Laboratory: LL**

EDD Filename: PrepDE141_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-023-SA8N-SB-9.0-10.0 *Collected:* 5/2/2011 3:50:00 PM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	17	J	7.2	MDL	22	PQL	ug/Kg	U	B
Di-n-octylphthalate	9.3	J	7.2	MDL	22	PQL	ug/Kg	J	Z

Sample ID: SL-050-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 10:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Di-n-octylphthalate	9.0	J	7.0	MDL	21	PQL	ug/Kg	J	Z

Sample ID: SL-050-SA8N-SB-9.0-10 *Collected:* 5/2/2011 10:50:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Di-n-octylphthalate	9.0	J	7.0	MDL	21	PQL	ug/Kg	J	Z

Method Category: VOA

Method: 8260B **Matrix: SO**

Sample ID: SL-022-SA8N-SB-4.0-5.0 *Collected:* 5/2/2011 12:10:00 *Analysis Type:* RES *Dilution:* 0.85

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	7.2	J	6.7	MDL	8.0	PQL	ug/Kg	J	Z
TOLUENE	0.08	J	0.08	MDL	4.0	PQL	ug/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE141 **Laboratory: LL**

EDD Filename: PrepDE141_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE141 **Laboratory: LL**

EDD Filename: PrepDE141_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE141 **Laboratory: LL**

EDD Filename: PrepDE141_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE141

Method Blank Outlier Report

Lab Reporting Batch ID: DE141 **Laboratory: LL**

EDD Filename: DE141_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P12508AB220902	5/8/2011 9:02:00 AM	PHOSPHORUS TIN	1.25 mg/Kg 1.48 mg/Kg	SL-012-SA8N-SB-4.0-5.0 SL-022-SA8N-SB-4.0-5.0 SL-022-SA8N-SB-9.0-10.0 SL-023-SA8N-SB-4.0-5.0 SL-023-SA8N-SB-9.0-10.0 SL-050-SA8N-SB-4.0-5.0 SL-050-SA8N-SB-9.0-10

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-012-SA8N-SB-4.0-5.0(RES)	TIN	3.07 mg/Kg	3.07U mg/Kg
SL-022-SA8N-SB-4.0-5.0(RES)	TIN	3.02 mg/Kg	3.02U mg/Kg
SL-022-SA8N-SB-9.0-10.0(RES)	TIN	2.96 mg/Kg	2.96U mg/Kg
SL-023-SA8N-SB-4.0-5.0(RES)	TIN	2.93 mg/Kg	2.93U mg/Kg
SL-023-SA8N-SB-9.0-10.0(RES)	TIN	2.65 mg/Kg	2.65U mg/Kg
SL-050-SA8N-SB-4.0-5.0(RES)	TIN	3.03 mg/Kg	3.03U mg/Kg
SL-050-SA8N-SB-9.0-10(RES)	TIN	3.08 mg/Kg	3.08U mg/Kg

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P12526AB221251A	5/9/2011 12:51:00 PM	VANADIUM	0.0265 mg/Kg	SL-012-SA8N-SB-4.0-5.0 SL-022-SA8N-SB-4.0-5.0 SL-022-SA8N-SB-9.0-10.0 SL-023-SA8N-SB-4.0-5.0 SL-023-SA8N-SB-9.0-10.0 SL-050-SA8N-SB-4.0-5.0 SL-050-SA8N-SB-9.0-10

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB48B211237A	5/6/2011 12:37:00 PM	TOLUENE	0.09 ug/Kg	SL-012-SA8N-SB-4.0-5.0 SL-022-SA8N-SB-4.0-5.0 SL-022-SA8N-SB-9.0-10.0 SL-023-SA8N-SB-4.0-5.0 SL-050-SA8N-SB-4.0-5.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-022-SA8N-SB-4.0-5.0(RES)	TOLUENE	0.08 ug/Kg	4.0U ug/Kg

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Method Blank Outlier Report

Lab Reporting Batch ID: DE141 **Laboratory: LL**

EDD Filename: DE141_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8270C SIM**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKLB12B260646	5/18/2011 6:46:00 AM	BIS(2-ETHYLHEXYL)PHTHALATE	8.8 ug/Kg	SL-012-SA8N-SB-4.0-5.0 SL-022-SA8N-SB-4.0-5.0 SL-022-SA8N-SB-9.0-10.0 SL-023-SA8N-SB-4.0-5.0 SL-023-SA8N-SB-9.0-10.0 SL-050-SA8N-SB-4.0-5.0 SL-050-SA8N-SB-9.0-10

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-012-SA8N-SB-4.0-5.0(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	7.2 ug/Kg	21U ug/Kg
SL-023-SA8N-SB-4.0-5.0(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	13 ug/Kg	21U ug/Kg
SL-023-SA8N-SB-9.0-10.0(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	17 ug/Kg	22U ug/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE141 **Laboratory: LL**

EDD Filename: DE141_v1 **eQAPP Name: CDM_SSFL_110509**

***Method:* 8330A**

***Matrix:* SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-012-SA8N-SB-4.0-5.0MSD (SL-012-SA8N-SB-4.0-5.0)	PETN	-	122	80.00-121.00	-	PETN	J (all detects)

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE141 **Laboratory: LL**

EDD Filename: DE141_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P4LZLCSQ262246 (SL-012-SA8N-SB-4.0-5.0 SL-022-SA8N-SB-4.0-5.0 SL-022-SA8N-SB-9.0-10.0 SL-023-SA8N-SB-4.0-5.0 SL-023-SA8N-SB-9.0-10.0 SL-050-SA8N-SB-4.0-5.0 SL-050-SA8N-SB-9.0-10)	BIS(2-CHLOROETHYL) ETHER	105	-	70.00-104.00	-	BIS(2-CHLOROETHYL) ETHER	J (all detects)

Method: 8260B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCSB48Q211301A (SL-012-SA8N-SB-4.0-5.0 SL-022-SA8N-SB-4.0-5.0 SL-022-SA8N-SB-9.0-10.0 SL-023-SA8N-SB-4.0-5.0 SL-050-SA8N-SB-4.0-5.0)	N-PROPYLBENZENE	122	-	77.00-120.00	-	N-PROPYLBENZENE	J(all detects)
	SEC-BUTYLBENZENE	121	-	75.00-120.00	-	SEC-BUTYLBENZENE	

Reporting Limit Outliers

Lab Reporting Batch ID: DE141 **Laboratory: LL**

EDD Filename: DE141_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-022-SA8N-SB-9.0-10.0	Nitrate-NO3	J	1.6	1.8	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-012-SA8N-SB-4.0-5.0	BORON	J	2.89	5.81	PQL	mg/Kg	J (all detects)
	TIN	J	3.07	11.6	PQL	mg/Kg	
SL-022-SA8N-SB-4.0-5.0	BORON	J	4.04	5.78	PQL	mg/Kg	J (all detects)
	TIN	J	3.02	11.6	PQL	mg/Kg	
SL-022-SA8N-SB-9.0-10.0	BORON	J	5.08	5.90	PQL	mg/Kg	J (all detects)
	TIN	J	2.96	11.8	PQL	mg/Kg	
SL-023-SA8N-SB-4.0-5.0	BORON	J	5.08	5.69	PQL	mg/Kg	J (all detects)
	SODIUM	J	112	114	PQL	mg/Kg	
	TIN	J	2.93	11.4	PQL	mg/Kg	
	Zirconium	J	5.48	5.69	PQL	mg/Kg	
SL-023-SA8N-SB-9.0-10.0	TIN	J	2.65	11.9	PQL	mg/Kg	J (all detects)
	Zirconium	J	5.66	5.93	PQL	mg/Kg	
SL-050-SA8N-SB-4.0-5.0	TIN	J	3.03	11.4	PQL	mg/Kg	J (all detects)
	Zirconium	J	4.72	5.72	PQL	mg/Kg	
SL-050-SA8N-SB-9.0-10	TIN	J	3.08	11.8	PQL	mg/Kg	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-012-SA8N-SB-4.0-5.0	ANTIMONY	J	0.236	0.237	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.117	0.118	PQL	mg/Kg	
	SELENIUM	J	0.196	0.474	PQL	mg/Kg	
	SILVER	J	0.0809	0.118	PQL	mg/Kg	
SL-022-SA8N-SB-4.0-5.0	SELENIUM	J	0.112	0.453	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0550	0.113	PQL	mg/Kg	
SL-022-SA8N-SB-9.0-10.0	SELENIUM	J	0.0701	0.477	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0596	0.119	PQL	mg/Kg	
SL-023-SA8N-SB-4.0-5.0	SELENIUM	J	0.143	0.473	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0676	0.118	PQL	mg/Kg	
SL-023-SA8N-SB-9.0-10.0	SELENIUM	J	0.145	0.470	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0606	0.117	PQL	mg/Kg	
SL-050-SA8N-SB-4.0-5.0	SELENIUM	J	0.243	0.466	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0910	0.117	PQL	mg/Kg	
SL-050-SA8N-SB-9.0-10	ANTIMONY	J	0.113	0.238	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0695	0.475	PQL	mg/Kg	
	SILVER	J	0.0389	0.119	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE141 **Laboratory: LL**

EDD Filename: DE141_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-022-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.53	1.2	PQL	mg/Kg	J (all detects)
SL-022-SA8N-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.60	1.2	PQL	mg/Kg	J (all detects)
SL-023-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.63	1.2	PQL	mg/Kg	J (all detects)
SL-023-SA8N-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.39	1.2	PQL	mg/Kg	J (all detects)
SL-050-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.48	1.2	PQL	mg/Kg	J (all detects)
SL-050-SA8N-SB-9.0-10	HEXAVALENT CHROMIUM	J	0.62	1.2	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-012-SA8N-SB-4.0-5.0	EFH (C30-C40)	J	0.65	1.4	PQL	mg/Kg	J (all detects)
SL-022-SA8N-SB-4.0-5.0	EFH (C21-C30)	J	0.74	1.4	PQL	mg/Kg	J (all detects)
SL-022-SA8N-SB-9.0-10.0	EFH (C21-C30) EFH (C30-C40)	J J	0.75 1.3	1.4 1.4	PQL PQL	mg/Kg mg/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-022-SA8N-SB-4.0-5.0	ACETONE TOLUENE	J J	7.2 0.08	8.0 4.0	PQL PQL	ug/Kg ug/Kg	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-012-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE Di-n-octylphthalate	J J	7.2 8.9	21 21	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-022-SA8N-SB-4.0-5.0	Di-n-octylphthalate	J	9.0	21	PQL	ug/Kg	J (all detects)
SL-022-SA8N-SB-9.0-10.0	Di-n-octylphthalate	J	8.9	21	PQL	ug/Kg	J (all detects)
SL-023-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE Di-n-octylphthalate	J J	13 8.9	21 21	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-023-SA8N-SB-9.0-10.0	BIS(2-ETHYLHEXYL)PHTHALATE Di-n-octylphthalate	J J	17 9.3	22 22	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-050-SA8N-SB-4.0-5.0	Di-n-octylphthalate	J	9.0	21	PQL	ug/Kg	J (all detects)
SL-050-SA8N-SB-9.0-10	Di-n-octylphthalate	J	9.0	21	PQL	ug/Kg	J (all detects)

LDC #: 26275F4 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/28/11
SDG #: DE141 ADR Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: ~
2nd Reviewer: CR

METHOD: Metals (EPA SW 846 Method 6010B/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 5/2/11
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	SW	3 see DE142
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N A	SRM.
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	See DE142 (Ba, Ca, Cr, Co, Cu, Pb, Ni, V) J/UJ
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: soil

1	SL-012-SA8N-SB-4.0-5.0	11		21		31	
2	SL-022-SA8N-SB-4.0-5.0	12		22		32	
3	SL-022-SA8N-SB-9.0-10.0	13		23		33	
4	SL-050-SA8N-SB-4.0-5.0	14		24		34	
5	SL-050-SA8N-SB-9.0-10.0	15		25		35	
6	SL-023-SA8N-SB-4.0-5.0	16		26		36	
7	SL-023-SA8N-SB-9.0-10.0	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

LDC #: 26275F4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000)
Sample Concentration units, unless otherwise noted: mg/Kg

Soil preparation factor applied: 200X
Associated Samples: All

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	1	2	3	4	5	6	7			
Se			0.33	0.33	0.20	0.11	0.070	0.24	0.070	0.14	0.15			

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".

Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

SAMPLE DELIVERY GROUP

DE142

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
03-May-2011	TB-050311	6275772	TB	5030B	8015M	III
03-May-2011	TB-050311	6275772	TB	5030B	8260B	III
03-May-2011	TB-050311	6275772	TB	5030B	8260B SIM	III
03-May-2011	SL-020-SA8N-SB-4.0-5.0	6275768	N	3050B	6010B	III
03-May-2011	SL-020-SA8N-SB-4.0-5.0	6275768	N	3050B	6020	III
03-May-2011	SL-020-SA8N-SB-4.0-5.0	6275768	N	3060A	7199	III
03-May-2011	SL-020-SA8N-SB-4.0-5.0	6275768	N	3546	1625C	III
03-May-2011	SL-020-SA8N-SB-4.0-5.0	6275768	N	3550B	8015B	III
03-May-2011	SL-020-SA8N-SB-4.0-5.0	6275768	N	3550B	8015M	III
03-May-2011	SL-020-SA8N-SB-4.0-5.0	6275768	N	3550B	8082	III
03-May-2011	SL-020-SA8N-SB-4.0-5.0	6275768	N	3550B	8270C	III
03-May-2011	SL-020-SA8N-SB-4.0-5.0	6275768	N	3550B	8270C SIM	III
03-May-2011	SL-020-SA8N-SB-4.0-5.0	6275768	N	5035	8015M	III
03-May-2011	SL-020-SA8N-SB-4.0-5.0	6275768	N	5035	8260B	III
03-May-2011	SL-020-SA8N-SB-4.0-5.0	6275768	N	5035	8260B SIM	III
03-May-2011	SL-020-SA8N-SB-4.0-5.0	6275768	N	8330	8330A	III
03-May-2011	SL-020-SA8N-SB-4.0-5.0	6275768	N	METHOD	300.0	III
03-May-2011	SL-020-SA8N-SB-4.0-5.0	6275768	N	METHOD	314.0	III
03-May-2011	SL-020-SA8N-SB-4.0-5.0	6275768	N	METHOD	7471A	III
03-May-2011	SL-020-SA8N-SB-4.0-5.0	6275768	N	METHOD	8015B	III
03-May-2011	SL-020-SA8N-SB-4.0-5.0	6275768	N	METHOD	8015M	III
03-May-2011	SL-020-SA8N-SB-4.0-5.0	6275768	N	METHOD	8315A	III
03-May-2011	SL-020-SA8N-SB-4.0-5.0	6275768	N	METHOD	9012B	III
03-May-2011	SL-020-SA8N-SB-9.0-10.0	6275769	N	3050B	6010B	III
03-May-2011	SL-020-SA8N-SB-9.0-10.0	6275769	N	3050B	6020	III
03-May-2011	SL-020-SA8N-SB-9.0-10.0	6275769	N	3060A	7199	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
03-May-2011	SL-020-SA8N-SB-9.0-10.0	6275769	N	3546	1625C	III
03-May-2011	SL-020-SA8N-SB-9.0-10.0	6275769	N	3550B	8015B	III
03-May-2011	SL-020-SA8N-SB-9.0-10.0	6275769	N	3550B	8015M	III
03-May-2011	SL-020-SA8N-SB-9.0-10.0	6275769	N	3550B	8082	III
03-May-2011	SL-020-SA8N-SB-9.0-10.0	6275769	N	3550B	8270C	III
03-May-2011	SL-020-SA8N-SB-9.0-10.0	6275769	N	3550B	8270C SIM	III
03-May-2011	SL-020-SA8N-SB-9.0-10.0	6275769	N	5035	8015M	III
03-May-2011	SL-020-SA8N-SB-9.0-10.0	6275769	N	5035	8260B	III
03-May-2011	SL-020-SA8N-SB-9.0-10.0	6275769	N	5035	8260B SIM	III
03-May-2011	SL-020-SA8N-SB-9.0-10.0	6275769	N	8330	8330A	III
03-May-2011	SL-020-SA8N-SB-9.0-10.0	6275769	N	METHOD	300.0	III
03-May-2011	SL-020-SA8N-SB-9.0-10.0	6275769	N	METHOD	314.0	III
03-May-2011	SL-020-SA8N-SB-9.0-10.0	6275769	N	METHOD	7471A	III
03-May-2011	SL-020-SA8N-SB-9.0-10.0	6275769	N	METHOD	8015B	III
03-May-2011	SL-020-SA8N-SB-9.0-10.0	6275769	N	METHOD	8015M	III
03-May-2011	SL-020-SA8N-SB-9.0-10.0	6275769	N	METHOD	8315A	III
03-May-2011	SL-020-SA8N-SB-9.0-10.0	6275769	N	METHOD	9012B	III
03-May-2011	DUP07-SA8N-QC-050311	6275771	FD	3050B	6010B	III
03-May-2011	DUP07-SA8N-QC-050311	6275771	FD	3050B	6020	III
03-May-2011	DUP07-SA8N-QC-050311	6275771	FD	3060A	7199	III
03-May-2011	DUP07-SA8N-QC-050311	6275771	FD	3550B	8082	III
03-May-2011	DUP07-SA8N-QC-050311	6275771	FD	3550B	8270C	III
03-May-2011	DUP07-SA8N-QC-050311	6275771	FD	3550B	8270C SIM	III
03-May-2011	DUP07-SA8N-QC-050311	6275771	FD	5035	8260B	III
03-May-2011	DUP07-SA8N-QC-050311	6275771	FD	5035	8260B SIM	III
03-May-2011	DUP07-SA8N-QC-050311	6275771	FD	METHOD	300.0	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
03-May-2011	DUP07-SA8N-QC-050311	6275771	FD	METHOD	314.0	III
03-May-2011	DUP07-SA8N-QC-050311	6275771	FD	METHOD	7471A	III
03-May-2011	DUP07-SA8N-QC-050311	6275771	FD	METHOD	8015M	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0	6275761	N	3050B	6010B	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0	6275761	N	3050B	6020	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0	6275761	N	3060A	7199	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0	6275761	N	3550B	8082	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0	6275761	N	3550B	8270C	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0	6275761	N	3550B	8270C SIM	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0	6275761	N	5035	8260B	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0	6275761	N	5035	8260B SIM	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0	6275761	N	METHOD	300.0	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0	6275761	N	METHOD	314.0	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0	6275761	N	METHOD	7471A	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0	6275761	N	METHOD	8015M	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0MS	6275762	MS	3050B	6010B	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0MS	6275762	MS	3050B	6020	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0MS	6275762	MS	3060A	7199	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0MS	6275762	MS	3550B	8082	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0MS	6275762	MS	3550B	8270C	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0MS	6275762	MS	3550B	8270C SIM	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0MS	6275762	MS	5035	8260B	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0MS	6275762	MS	5035	8260B SIM	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0MS	6275762	MS	METHOD	300.0	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0MS	6275762	MS	METHOD	314.0	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0MS	6275762	MS	METHOD	7471A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
03-May-2011	SL-015-SA8N-SB-4.0-5.0MS	6275762	MS	METHOD	8015M	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0MSD	6275763	MSD	3050B	6010B	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0MSD	6275763	MSD	3050B	6020	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0MSD	6275763	MSD	3550B	8082	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0MSD	6275763	MSD	3550B	8270C	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0MSD	6275763	MSD	3550B	8270C SIM	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0MSD	6275763	MSD	5035	8260B	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0MSD	6275763	MSD	5035	8260B SIM	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0MSD	6275763	MSD	METHOD	7471A	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0MSD	6275763	MSD	METHOD	8015M	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0DUP	6275764	DUP	3050B	6010B	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0DUP	6275764	DUP	3050B	6020	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0DUP	6275764	DUP	3060A	7199	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0DUP	6275764	DUP	METHOD	300.0	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0DUP	6275764	DUP	METHOD	314.0	III
03-May-2011	SL-015-SA8N-SB-4.0-5.0DUP	6275764	DUP	METHOD	7471A	III
03-May-2011	SL-016-SA8N-SB-3.0-4.0	6275765	N	3050B	6010B	III
03-May-2011	SL-016-SA8N-SB-3.0-4.0	6275765	N	3050B	6020	III
03-May-2011	SL-016-SA8N-SB-3.0-4.0	6275765	N	3060A	7199	III
03-May-2011	SL-016-SA8N-SB-3.0-4.0	6275765	N	3550B	8082	III
03-May-2011	SL-016-SA8N-SB-3.0-4.0	6275765	N	3550B	8270C	III
03-May-2011	SL-016-SA8N-SB-3.0-4.0	6275765	N	3550B	8270C SIM	III
03-May-2011	SL-016-SA8N-SB-3.0-4.0	6275765	N	5035	8260B	III
03-May-2011	SL-016-SA8N-SB-3.0-4.0	6275765	N	5035	8260B SIM	III
03-May-2011	SL-016-SA8N-SB-3.0-4.0	6275765	N	METHOD	300.0	III
03-May-2011	SL-016-SA8N-SB-3.0-4.0	6275765	N	METHOD	314.0	III

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
03-May-2011	SL-016-SA8N-SB-3.0-4.0	6275765	N	METHOD	7471A	III
03-May-2011	SL-016-SA8N-SB-3.0-4.0	6275765	N	METHOD	8015M	III
03-May-2011	EB08-SA8N-SB-050311	6275770	EB	3005A	6010B	III
03-May-2011	EB08-SA8N-SB-050311	6275770	EB	3020A	6020	III
03-May-2011	EB08-SA8N-SB-050311	6275770	EB	3510C	8082	III
03-May-2011	EB08-SA8N-SB-050311	6275770	EB	3510C	8270C	III
03-May-2011	EB08-SA8N-SB-050311	6275770	EB	5030B	8260B	III
03-May-2011	EB08-SA8N-SB-050311	6275770	EB	5030B	8260B SIM	III
03-May-2011	EB08-SA8N-SB-050311	6275770	EB	Gen Prep	300.0	III
03-May-2011	EB08-SA8N-SB-050311	6275770	EB	Gen Prep	314.0	III
03-May-2011	EB08-SA8N-SB-050311	6275770	EB	Gen Prep	7199	III
03-May-2011	EB08-SA8N-SB-050311	6275770	EB	Gen Prep	8015M	III
03-May-2011	EB08-SA8N-SB-050311	6275770	EB	METHOD	7470A	III
03-May-2011	EB08-SA8N-SB-050311MSD	P275770M321826A	MSD	Gen Prep	8015M	III
03-May-2011	EB08-SA8N-SB-050311MS	P275770R321808A	MS	Gen Prep	8015M	III
03-May-2011	SL-018-SA8N-SB-4.0-5.0	6275766	N	3050B	6010B	III
03-May-2011	SL-018-SA8N-SB-4.0-5.0	6275766	N	3050B	6020	III
03-May-2011	SL-018-SA8N-SB-4.0-5.0	6275766	N	3060A	7199	III
03-May-2011	SL-018-SA8N-SB-4.0-5.0	6275766	N	3550B	8082	III
03-May-2011	SL-018-SA8N-SB-4.0-5.0	6275766	N	3550B	8270C	III
03-May-2011	SL-018-SA8N-SB-4.0-5.0	6275766	N	3550B	8270C SIM	III
03-May-2011	SL-018-SA8N-SB-4.0-5.0	6275766	N	5035	8260B	III
03-May-2011	SL-018-SA8N-SB-4.0-5.0	6275766	N	5035	8260B SIM	III
03-May-2011	SL-018-SA8N-SB-4.0-5.0	6275766	N	METHOD	300.0	III
03-May-2011	SL-018-SA8N-SB-4.0-5.0	6275766	N	METHOD	314.0	III
03-May-2011	SL-018-SA8N-SB-4.0-5.0	6275766	N	METHOD	7471A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
03-May-2011	SL-019-SA8N-SB-4.0-5.0	6275767	N	3050B	6010B	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0	6275767	N	3050B	6020	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0	6275767	N	3060A	7199	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0	6275767	N	3546	1625C	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0	6275767	N	3550B	8015B	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0	6275767	N	3550B	8015M	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0	6275767	N	3550B	8082	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0	6275767	N	3550B	8270C	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0	6275767	N	3550B	8270C SIM	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0	6275767	N	5035	8015M	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0	6275767	N	5035	8260B	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0	6275767	N	5035	8260B SIM	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0	6275767	N	8330	8330A	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0	6275767	N	METHOD	300.0	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0	6275767	N	METHOD	314.0	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0	6275767	N	METHOD	7471A	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0	6275767	N	METHOD	8015B	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0	6275767	N	METHOD	8015M	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0	6275767	N	METHOD	8315A	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0	6275767	N	METHOD	9012B	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0MSD	P275767M261549	MSD	3546	1625C	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0MSD	P275767M320403A	MSD	3550B	8015B	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0MS	P275767R261532	MS	3546	1625C	III
03-May-2011	SL-019-SA8N-SB-4.0-5.0MS	P275767R320318A	MS	3550B	8015B	III

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE142 Laboratory: LL

EDD Filename: PrepDE142_v1 eQAPP Name: CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: DUP07-SA8N-QC-050311 *Collected:* 5/3/2011 9:50:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	8.1		0.93	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-015-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 10:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	5.7		0.94	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-016-SA8N-SB-3.0-4.0 *Collected:* 5/3/2011 11:44:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	6.4		0.92	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-018-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 2:03:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	8.0		0.91	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-019-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 3:44:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.8		0.92	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-020-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 9:35:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.8		0.94	MDL	1.2	PQL	mg/Kg	J	Q
Nitrate-NO3	1.1	J	0.94	MDL	1.8	PQL	mg/Kg	J	Z

Sample ID: SL-020-SA8N-SB-9.0-10.0 *Collected:* 5/3/2011 9:39:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.9		0.98	MDL	1.2	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE142 **Laboratory: LL**

EDD Filename: PrepDE142_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: DUP07-SA8N-QC-050311 **Collected:** 5/3/2011 9:50:00 AM **Analysis Type:** REA2 **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	0.992	U	0.992	MDL	5.57	PQL	mg/Kg	UJ	FD
CALCIUM	5490		6.83	MDL	22.3	PQL	mg/Kg	J	A
MANGANESE	291		0.0869	MDL	0.557	PQL	mg/Kg	J	E
PHOSPHORUS	237		0.624	MDL	11.1	PQL	mg/Kg	J	FD
TIN	3.21	J	1.11	MDL	11.1	PQL	mg/Kg	U	B

Sample ID: SL-015-SA8N-SB-4.0-5.0 **Collected:** 5/3/2011 10:40:00 **Analysis Type:** REA2 **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	4830		7.05	MDL	23.0	PQL	mg/Kg	J	A
MANGANESE	489		0.0896	MDL	0.575	PQL	mg/Kg	J	E
TIN	3.22	J	1.15	MDL	11.5	PQL	mg/Kg	U	B

Sample ID: SL-016-SA8N-SB-3.0-4.0 **Collected:** 5/3/2011 11:44:00 **Analysis Type:** REA2 **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	3410		6.89	MDL	22.5	PQL	mg/Kg	J	A
MANGANESE	199		0.0877	MDL	0.562	PQL	mg/Kg	J	E
TIN	3.00	J	1.12	MDL	11.2	PQL	mg/Kg	U	B
Zirconium	4.90	J	0.944	MDL	5.62	PQL	mg/Kg	J	Z

Sample ID: SL-018-SA8N-SB-4.0-5.0 **Collected:** 5/3/2011 2:03:00 PM **Analysis Type:** REA2 **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.14	J	1.00	MDL	5.62	PQL	mg/Kg	J	Z, FD
CALCIUM	3410		6.89	MDL	22.5	PQL	mg/Kg	J	A
PHOSPHORUS	108		0.629	MDL	11.2	PQL	mg/Kg	J	FD
TIN	3.23	J	1.12	MDL	11.2	PQL	mg/Kg	U	B
Zirconium	5.27	J	0.944	MDL	5.62	PQL	mg/Kg	J	Z

Sample ID: SL-018-SA8N-SB-4.0-5.0 **Collected:** 5/3/2011 2:03:00 PM **Analysis Type:** REA3 **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	458		0.0877	MDL	0.562	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE142 **Laboratory:** LL

EDD Filename: PrepDE142_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-019-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 3:44:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	4060		6.94	MDL	22.6	PQL	mg/Kg	J	A
MANGANESE	355		0.0883	MDL	0.566	PQL	mg/Kg	J	E
TIN	2.85	J	1.13	MDL	11.3	PQL	mg/Kg	U	B
Zirconium	5.39	J	0.951	MDL	5.66	PQL	mg/Kg	J	Z

Sample ID: SL-020-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 9:35:00 AM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	1.53	J	1.02	MDL	5.74	PQL	mg/Kg	J	Z
CALCIUM	5640		7.04	MDL	23.0	PQL	mg/Kg	J	A
MANGANESE	510		0.0895	MDL	0.574	PQL	mg/Kg	J	E
TIN	2.86	J	1.15	MDL	11.5	PQL	mg/Kg	U	B

Sample ID: SL-020-SA8N-SB-9.0-10.0 *Collected:* 5/3/2011 9:39:00 AM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.28	J	1.06	MDL	5.96	PQL	mg/Kg	J	Z
CALCIUM	6820		7.30	MDL	23.8	PQL	mg/Kg	J	A
MANGANESE	265		0.0929	MDL	0.596	PQL	mg/Kg	J	E
TIN	2.98	J	1.19	MDL	11.9	PQL	mg/Kg	U	B

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: DUP07-SA8N-QC-050311 *Collected:* 5/3/2011 9:50:00 AM *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.384		0.0675	MDL	0.225	PQL	mg/Kg	J	Q
ARSENIC	7.24		0.0900	MDL	0.450	PQL	mg/Kg	J	Q, Q
BERYLLIUM	0.944		0.0180	MDL	0.112	PQL	mg/Kg	J	Q, E
CHROMIUM	30.8		0.135	MDL	0.450	PQL	mg/Kg	J	Q, A
COBALT	11.7		0.0225	MDL	0.112	PQL	mg/Kg	J	E, A
COPPER	15.5		0.0742	MDL	0.450	PQL	mg/Kg	J	Q, A
LEAD	9.20		0.0117	MDL	0.225	PQL	mg/Kg	J	Q, A
NICKEL	25.6		0.112	MDL	0.450	PQL	mg/Kg	J	Q, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE142 **Laboratory:** LL

EDD Filename: PrepDE142_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: DUP07-SA8N-QC-050311 ***Collected:*** 5/3/2011 9:50:00 AM ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0754	J	0.0135	MDL	0.112	PQL	mg/Kg	J	Z
VANADIUM	53.5		0.0247	MDL	0.112	PQL	mg/Kg	J	E, A
ZINC	68.1		0.630	MDL	3.37	PQL	mg/Kg	J	E

Sample ID: DUP07-SA8N-QC-050311 ***Collected:*** 5/3/2011 9:50:00 AM ***Analysis Type:*** REA5 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.136		0.0450	MDL	0.112	PQL	mg/Kg	UJ	E, B

Sample ID: DUP07-SA8N-QC-050311 ***Collected:*** 5/3/2011 9:50:00 AM ***Analysis Type:*** REA6 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0914	J	0.0450	MDL	0.450	PQL	mg/Kg	UJ	FD, B

Sample ID: DUP07-SA8N-QC-050311 ***Collected:*** 5/3/2011 9:50:00 AM ***Analysis Type:*** REA7 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.431		0.0562	MDL	0.112	PQL	mg/Kg	J	E

Sample ID: DUP07-SA8N-QC-050311 ***Collected:*** 5/3/2011 9:50:00 AM ***Analysis Type:*** REA8 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	142		0.121	MDL	0.450	PQL	mg/Kg	J	E, A

Sample ID: SL-015-SA8N-SB-4.0-5.0 ***Collected:*** 5/3/2011 10:40:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.200	J	0.0690	MDL	0.230	PQL	mg/Kg	J	Z, Q
ARSENIC	6.85		0.0919	MDL	0.460	PQL	mg/Kg	J	Q, Q
BERYLLIUM	0.830		0.0184	MDL	0.115	PQL	mg/Kg	J	Q, E
CHROMIUM	28.2		0.138	MDL	0.460	PQL	mg/Kg	J	Q, A
COBALT	8.97		0.0230	MDL	0.115	PQL	mg/Kg	J	E, A
COPPER	11.7		0.0759	MDL	0.460	PQL	mg/Kg	J	Q, A
LEAD	8.10		0.0120	MDL	0.230	PQL	mg/Kg	J	Q, A
NICKEL	21.2		0.115	MDL	0.460	PQL	mg/Kg	J	Q, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE142 **Laboratory:** LL

EDD Filename: PrepDE142_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-015-SA8N-SB-4.0-5.0 ***Collected:*** 5/3/2011 10:40:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0576	J	0.0138	MDL	0.115	PQL	mg/Kg	J	Z
VANADIUM	49.7		0.0253	MDL	0.115	PQL	mg/Kg	J	E, A
ZINC	59.4		0.644	MDL	3.45	PQL	mg/Kg	J	E

Sample ID: SL-015-SA8N-SB-4.0-5.0 ***Collected:*** 5/3/2011 10:40:00 ***Analysis Type:*** REA5 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.107	J	0.0460	MDL	0.115	PQL	mg/Kg	J	Z, E

Sample ID: SL-015-SA8N-SB-4.0-5.0 ***Collected:*** 5/3/2011 10:40:00 ***Analysis Type:*** REA6 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.116	J	0.0460	MDL	0.460	PQL	mg/Kg	U	B

Sample ID: SL-015-SA8N-SB-4.0-5.0 ***Collected:*** 5/3/2011 10:40:00 ***Analysis Type:*** REA7 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.293		0.0575	MDL	0.115	PQL	mg/Kg	J	E

Sample ID: SL-015-SA8N-SB-4.0-5.0 ***Collected:*** 5/3/2011 10:40:00 ***Analysis Type:*** REA8 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	133		0.124	MDL	0.460	PQL	mg/Kg	J	E, A

Sample ID: SL-016-SA8N-SB-3.0-4.0 ***Collected:*** 5/3/2011 11:44:00 ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.256		0.0688	MDL	0.229	PQL	mg/Kg	J	Q
ARSENIC	5.38		0.0917	MDL	0.459	PQL	mg/Kg	J	Q, Q
BERYLLIUM	0.654		0.0183	MDL	0.115	PQL	mg/Kg	J	Q, E
CADMIUM	0.0459	U	0.0459	MDL	0.115	PQL	mg/Kg	UJ	E
CHROMIUM	24.8		0.138	MDL	0.459	PQL	mg/Kg	J	Q, A
COBALT	5.99		0.0229	MDL	0.115	PQL	mg/Kg	J	E, A
COPPER	8.58		0.0757	MDL	0.459	PQL	mg/Kg	J	Q, A
LEAD	4.97		0.0119	MDL	0.229	PQL	mg/Kg	J	Q, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE142 Laboratory: LL

EDD Filename: PrepDE142_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-016-SA8N-SB-3.0-4.0 *Collected:* 5/3/2011 11:44:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	13.8		0.115	MDL	0.459	PQL	mg/Kg	J	Q, A
SILVER	0.0368	J	0.0138	MDL	0.115	PQL	mg/Kg	J	Z
VANADIUM	42.0		0.0252	MDL	0.115	PQL	mg/Kg	J	E, A
ZINC	49.8		0.642	MDL	3.44	PQL	mg/Kg	J	E

Sample ID: SL-016-SA8N-SB-3.0-4.0 *Collected:* 5/3/2011 11:44:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.133	J	0.0459	MDL	0.459	PQL	mg/Kg	U	B

Sample ID: SL-016-SA8N-SB-3.0-4.0 *Collected:* 5/3/2011 11:44:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.347		0.0573	MDL	0.115	PQL	mg/Kg	J	E

Sample ID: SL-016-SA8N-SB-3.0-4.0 *Collected:* 5/3/2011 11:44:00 *Analysis Type:* REA8 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	87.8		0.124	MDL	0.459	PQL	mg/Kg	J	E, A

Sample ID: SL-018-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 2:03:00 PM *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.278		0.0668	MDL	0.223	PQL	mg/Kg	J	Q
ARSENIC	7.52		0.0890	MDL	0.445	PQL	mg/Kg	J	Q, Q
BERYLLIUM	0.970		0.0178	MDL	0.111	PQL	mg/Kg	J	Q, E
CHROMIUM	30.2		0.134	MDL	0.445	PQL	mg/Kg	J	Q, A
COBALT	10.5		0.0223	MDL	0.111	PQL	mg/Kg	J	E, A
COPPER	12.5		0.0734	MDL	0.445	PQL	mg/Kg	J	Q, A
LEAD	9.29		0.0116	MDL	0.223	PQL	mg/Kg	J	Q, A
NICKEL	19.3		0.111	MDL	0.445	PQL	mg/Kg	J	Q, A
SILVER	0.0574	J	0.0134	MDL	0.111	PQL	mg/Kg	J	Z
VANADIUM	53.9		0.0245	MDL	0.111	PQL	mg/Kg	J	E, A
ZINC	59.3		0.623	MDL	3.34	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE142 Laboratory: LL

EDD Filename: PrepDE142_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-018-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 2:03:00 PM *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.116		0.0445	MDL	0.111	PQL	mg/Kg	J	E

Sample ID: SL-018-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 2:03:00 PM *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.190	J	0.0445	MDL	0.445	PQL	mg/Kg	UJ	FD, B

Sample ID: SL-018-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 2:03:00 PM *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.627		0.0556	MDL	0.111	PQL	mg/Kg	J	E

Sample ID: SL-018-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 2:03:00 PM *Analysis Type:* REA8 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	136		0.120	MDL	0.445	PQL	mg/Kg	J	E, A

Sample ID: SL-019-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 3:44:00 PM *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.217	J	0.0679	MDL	0.226	PQL	mg/Kg	J	Z, Q
ARSENIC	5.99		0.0906	MDL	0.453	PQL	mg/Kg	J	Q, Q
BERYLLIUM	0.820		0.0181	MDL	0.113	PQL	mg/Kg	J	Q, E
CHROMIUM	26.2		0.136	MDL	0.453	PQL	mg/Kg	J	Q, A
COBALT	10.1		0.0226	MDL	0.113	PQL	mg/Kg	J	E, A
COPPER	10.6		0.0747	MDL	0.453	PQL	mg/Kg	J	Q, A
LEAD	7.71		0.0118	MDL	0.226	PQL	mg/Kg	J	Q, A
NICKEL	24.7		0.113	MDL	0.453	PQL	mg/Kg	J	Q, A
SILVER	0.0559	J	0.0136	MDL	0.113	PQL	mg/Kg	J	Z
VANADIUM	44.9		0.0249	MDL	0.113	PQL	mg/Kg	J	E, A
ZINC	52.7		0.634	MDL	3.40	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE142 Laboratory: LL

EDD Filename: PrepDE142_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-019-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 3:44:00 PM *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.218		0.0453	MDL	0.113	PQL	mg/Kg	J	E

Sample ID: SL-019-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 3:44:00 PM *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0961	J	0.0453	MDL	0.453	PQL	mg/Kg	U	B

Sample ID: SL-019-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 3:44:00 PM *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.457		0.0566	MDL	0.113	PQL	mg/Kg	J	E

Sample ID: SL-019-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 3:44:00 PM *Analysis Type:* REA8 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	140		0.122	MDL	0.453	PQL	mg/Kg	J	E, A

Sample ID: SL-020-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 9:35:00 AM *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.296		0.0703	MDL	0.234	PQL	mg/Kg	J	Q
ARSENIC	6.96		0.0937	MDL	0.468	PQL	mg/Kg	J	Q, Q
BERYLLIUM	0.966		0.0187	MDL	0.117	PQL	mg/Kg	J	Q, E
CHROMIUM	34.1		0.141	MDL	0.468	PQL	mg/Kg	J	Q, A
COBALT	10.1		0.0234	MDL	0.117	PQL	mg/Kg	J	E, A
COPPER	17.4		0.0773	MDL	0.468	PQL	mg/Kg	J	Q, A
LEAD	10.6		0.0122	MDL	0.234	PQL	mg/Kg	J	Q, A
NICKEL	21.9		0.117	MDL	0.468	PQL	mg/Kg	J	Q, A
SILVER	0.0554	J	0.0141	MDL	0.117	PQL	mg/Kg	J	Z
VANADIUM	55.4		0.0258	MDL	0.117	PQL	mg/Kg	J	E, A
ZINC	71.4		0.656	MDL	3.51	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE142 **Laboratory:** LL

EDD Filename: PrepDE142_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-020-SA8N-SB-4.0-5.0 ***Collected:*** 5/3/2011 9:35:00 AM ***Analysis Type:*** REA5 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.264		0.0468	MDL	0.117	PQL	mg/Kg	J	E

Sample ID: SL-020-SA8N-SB-4.0-5.0 ***Collected:*** 5/3/2011 9:35:00 AM ***Analysis Type:*** REA6 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.161	J	0.0468	MDL	0.468	PQL	mg/Kg	U	B

Sample ID: SL-020-SA8N-SB-4.0-5.0 ***Collected:*** 5/3/2011 9:35:00 AM ***Analysis Type:*** REA7 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.518		0.0585	MDL	0.117	PQL	mg/Kg	J	E

Sample ID: SL-020-SA8N-SB-4.0-5.0 ***Collected:*** 5/3/2011 9:35:00 AM ***Analysis Type:*** REA8 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	153		0.126	MDL	0.468	PQL	mg/Kg	J	E, A

Sample ID: SL-020-SA8N-SB-9.0-10.0 ***Collected:*** 5/3/2011 9:39:00 AM ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.252		0.0708	MDL	0.236	PQL	mg/Kg	J	Q
ARSENIC	7.35		0.0944	MDL	0.472	PQL	mg/Kg	J	Q, Q
BERYLLIUM	0.915		0.0189	MDL	0.118	PQL	mg/Kg	J	Q, E
CHROMIUM	34.6		0.142	MDL	0.472	PQL	mg/Kg	J	Q, A
COBALT	9.80		0.0236	MDL	0.118	PQL	mg/Kg	J	E, A
COPPER	16.7		0.0779	MDL	0.472	PQL	mg/Kg	J	Q, A
LEAD	9.71		0.0123	MDL	0.236	PQL	mg/Kg	J	Q, A
NICKEL	21.3		0.118	MDL	0.472	PQL	mg/Kg	J	Q, A
SILVER	0.0414	J	0.0142	MDL	0.118	PQL	mg/Kg	J	Z
VANADIUM	61.1		0.0260	MDL	0.118	PQL	mg/Kg	J	E, A
ZINC	73.0		0.661	MDL	3.54	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE142 **Laboratory:** LL

EDD Filename: PrepDE142_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS **Method:** 6020 **Matrix:** SO

Sample ID: SL-020-SA8N-SB-9.0-10.0 *Collected:* 5/3/2011 9:39:00 AM *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.238		0.0472	MDL	0.118	PQL	mg/Kg	J	E

Sample ID: SL-020-SA8N-SB-9.0-10.0 *Collected:* 5/3/2011 9:39:00 AM *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0968	J	0.0472	MDL	0.472	PQL	mg/Kg	U	B

Sample ID: SL-020-SA8N-SB-9.0-10.0 *Collected:* 5/3/2011 9:39:00 AM *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.277		0.0590	MDL	0.118	PQL	mg/Kg	J	E

Sample ID: SL-020-SA8N-SB-9.0-10.0 *Collected:* 5/3/2011 9:39:00 AM *Analysis Type:* REA8 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	126		0.127	MDL	0.472	PQL	mg/Kg	J	E, A

Method Category: METALS **Method:** 7199 **Matrix:** SO

Sample ID: SL-015-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 10:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.83	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Method Category: METALS **Method:** 7470A **Matrix:** AQ

Sample ID: EB08-SA8N-SB-050311 *Collected:* 5/3/2011 12:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.000046	U	0.000046	MDL	0.00020	PQL	mg/L	UJ	L

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE142 **Laboratory:** LL

EDD Filename: PrepDE142_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS **Method:** 7471A **Matrix:** SO

Sample ID: DUP07-SA8N-QC-050311 *Collected:* 5/3/2011 9:50:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0056	J	0.0031	MDL	0.109	PQL	mg/Kg	J	Z, FD

Sample ID: SL-018-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 2:03:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0031	U	0.0031	MDL	0.110	PQL	mg/Kg	UJ	FD

Method Category: SVOA **Method:** 1625C **Matrix:** SO

Sample ID: SL-019-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 3:44:00 PM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	23.0	J	19.0	MDL	38.0	PQL	ng/Kg	J	Z

Sample ID: SL-020-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 9:35:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	28.5	J	19.4	MDL	38.8	PQL	ng/Kg	J	Z

Method Category: SVOA **Method:** 8015M **Matrix:** AQ

Sample ID: EB08-SA8N-SB-050311 *Collected:* 5/3/2011 12:50:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Propylene glycol	10	U	10	MDL	100	PQL	mg/L	UJ	Q

Method Category: SVOA **Method:** 8015M **Matrix:** SO

Sample ID: SL-015-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 10:40:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIETHYLENE GLYCOL	5.9	U	5.9	MDL	12	PQL	mg/Kg	UJ	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE142 **Laboratory: LL**

EDD Filename: PrepDE142_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-015-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 10:40:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ETHYLENE GLYCOL	5.9	U	5.9	MDL	12	PQL	mg/Kg	UJ	Q
Propylene glycol	5.9	U	5.9	MDL	12	PQL	mg/Kg	UJ	Q

Sample ID: SL-019-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 3:44:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.51	J	0.46	MDL	1.4	PQL	mg/Kg	J	Z

Sample ID: SL-020-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 9:35:00 AM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	0.47	J	0.47	MDL	1.4	PQL	mg/Kg	J	Z
EFH (C30-C40)	0.61	J	0.47	MDL	1.4	PQL	mg/Kg	J	Z

Sample ID: SL-020-SA8N-SB-9.0-10.0 *Collected:* 5/3/2011 9:39:00 AM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.67	J	0.49	MDL	1.5	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8270C **Matrix: AQ**

Sample ID: EB08-SA8N-SB-050311 *Collected:* 5/3/2011 12:50:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROPHENOL	10	U	10	MDL	31	PQL	ug/L	UJ	E
BENZOIC ACID	6	U	6	MDL	16	PQL	ug/L	UJ	E
PHENOL	1	U	1	MDL	5	PQL	ug/L	UJ	E

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE142 **Laboratory:** LL

EDD Filename: PrepDE142_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA **Method:** 8270C **Matrix:** SO

Sample ID: SL-015-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 10:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZIDINE	1300	U	1300	MDL	3900	PQL	ug/Kg	UJ	Q

Method Category: SVOA **Method:** 8270C SIM **Matrix:** SO

Sample ID: DUP07-SA8N-QC-050311 *Collected:* 5/3/2011 9:50:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Di-n-octylphthalate	8.9	J	6.9	MDL	21	PQL	ug/Kg	J	Z

Sample ID: SL-015-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 10:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	8.2	J	7.0	MDL	21	PQL	ug/Kg	J	Z
Di-n-butylphthalate	8.1	J	7.0	MDL	21	PQL	ug/Kg	J	Z
Di-n-octylphthalate	9.7	J	7.0	MDL	21	PQL	ug/Kg	J	Z

Sample ID: SL-016-SA8N-SB-3.0-4.0 *Collected:* 5/3/2011 11:44:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	16	J	6.9	MDL	21	PQL	ug/Kg	J	Z
Di-n-octylphthalate	9.2	J	6.9	MDL	21	PQL	ug/Kg	J	Z

Sample ID: SL-018-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 2:03:00 PM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Di-n-octylphthalate	9.0	J	6.8	MDL	20	PQL	ug/Kg	J	Z

Sample ID: SL-019-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 3:44:00 PM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	10	J	6.8	MDL	20	PQL	ug/Kg	J	Z
Di-n-octylphthalate	9.1	J	6.8	MDL	20	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE142 **Laboratory: LL**

EDD Filename: PrepDE142_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-020-SA8N-SB-9.0-10.0 *Collected:* 5/3/2011 9:39:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	9.1	J	7.3	MDL	22	PQL	ug/Kg	J	Z
Di-n-octylphthalate	9.8	J	7.3	MDL	22	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8315A **Matrix: SO**

Sample ID: SL-019-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 3:44:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	690	U	690	MDL	1700	PQL	ug/Kg	UJ	L, S, H

Sample ID: SL-020-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 9:35:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	700	U	700	MDL	1800	PQL	ug/Kg	UJ	L, S, H

Sample ID: SL-020-SA8N-SB-9.0-10.0 *Collected:* 5/3/2011 9:39:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	740	U	740	MDL	1800	PQL	ug/Kg	UJ	L, S, H

Method Category: VOA

Method: 8260B **Matrix: SO**

Sample ID: DUP07-SA8N-QC-050311 *Collected:* 5/3/2011 9:50:00 AM *Analysis Type:* RES *Dilution:* 0.85

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOLUENE	0.08	J	0.08	MDL	3.9	PQL	ug/Kg	UJ	B, FD

Sample ID: SL-016-SA8N-SB-3.0-4.0 *Collected:* 5/3/2011 11:44:00 *Analysis Type:* RES *Dilution:* 0.85

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	7.2	J	6.6	MDL	7.8	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE142 **Laboratory:** LL

EDD Filename: PrepDE142_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-018-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 2:03:00 PM *Analysis Type:* RES *Dilution:* 0.92

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOLUENE	0.08	U	0.08	MDL	4.2	PQL	ug/Kg	UJ	FD

Sample ID: SL-019-SA8N-SB-4.0-5.0 *Collected:* 5/3/2011 3:44:00 PM *Analysis Type:* RES *Dilution:* 0.96

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.3	J	7.4	MDL	8.9	PQL	ug/Kg	J	Z
CHLOROFORM	0.15	J	0.13	MDL	4.4	PQL	ug/Kg	J	Z

Sample ID: SL-020-SA8N-SB-9.0-10.0 *Collected:* 5/3/2011 9:39:00 AM *Analysis Type:* RES *Dilution:* 0.95

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOLUENE	.0.09	J	0.09	MDL	4.6	PQL	ug/Kg	U	B
VINYL CHLORIDE	0.27	J	0.23	MDL	4.6	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE142 **Laboratory: LL**

EDD Filename: PrepDE142_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE142 **Laboratory: LL**

EDD Filename: PrepDE142_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE142 **Laboratory: LL**

EDD Filename: PrepDE142_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE142

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: DE142 **Laboratory: LL**
EDD Filename: PrepDE142_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8315A **Preparation Method: METHOD**
Matrix: SO

Sample ID	*Type*	*Actual*	*Criteria*	*Units*	*Flag*
SL-019-SA8N-SB-4.0-5.0 (RES)	Sampling To Extraction	21.00	14.00	DAYS	J (all detects)
SL-020-SA8N-SB-4.0-5.0 (RES)		21.00	14.00	DAYS	UJ (all non-detects)
SL-020-SA8N-SB-9.0-10.0 (RES)		21.00	14.00	DAYS	

Method Blank Outlier Report

Lab Reporting Batch ID: DE142 **Laboratory: LL**

EDD Filename: DE142_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P12508AB220902	5/8/2011 9:02:00 AM	PHOSPHORUS TIN	1.25 mg/Kg 1.48 mg/Kg	DUP07-SA8N-QC-050311 SL-015-SA8N-SB-4.0-5.0 SL-016-SA8N-SB-3.0-4.0 SL-018-SA8N-SB-4.0-5.0 SL-019-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-9.0-10.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP07-SA8N-QC-050311(REA2)	TIN	3.21 mg/Kg	3.21U mg/Kg
SL-015-SA8N-SB-4.0-5.0(REA2)	TIN	3.22 mg/Kg	3.22U mg/Kg
SL-016-SA8N-SB-3.0-4.0(REA2)	TIN	3.00 mg/Kg	3.00U mg/Kg
SL-018-SA8N-SB-4.0-5.0(REA2)	TIN	3.23 mg/Kg	3.23U mg/Kg
SL-019-SA8N-SB-4.0-5.0(REA2)	TIN	2.85 mg/Kg	2.85U mg/Kg
SL-020-SA8N-SB-4.0-5.0(REA2)	TIN	2.86 mg/Kg	2.86U mg/Kg
SL-020-SA8N-SB-9.0-10.0(REA2)	TIN	2.98 mg/Kg	2.98U mg/Kg

Method: **6020**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P12450BB221348A	5/6/2011 1:48:00 PM	CADMIUM LEAD	0.00038 mg/L 0.000054 mg/L	EB08-SA8N-SB-050311

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P12526AB221251A	5/9/2011 12:51:00 PM	VANADIUM	0.0265 mg/Kg	DUP07-SA8N-QC-050311 SL-015-SA8N-SB-4.0-5.0 SL-016-SA8N-SB-3.0-4.0 SL-018-SA8N-SB-4.0-5.0 SL-019-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-9.0-10.0

Method Blank Outlier Report

Lab Reporting Batch ID: DE142 **Laboratory: LL**

EDD Filename: DE142_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB48B211237A	5/6/2011 12:37:00 PM	TOLUENE	0.09 ug/Kg	DUP07-SA8N-QC-050311 SL-015-SA8N-SB-4.0-5.0 SL-016-SA8N-SB-3.0-4.0 SL-018-SA8N-SB-4.0-5.0 SL-019-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-9.0-10.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP07-SA8N-QC-050311(RES)	TOLUENE	0.08 ug/Kg	3.9U ug/Kg
SL-020-SA8N-SB-9.0-10.0(RES)	TOLUENE	0.09 ug/Kg	4.6U ug/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE142 | Laboratory: LL

EDD Filename: DE142_v1 | eQAPP Name: CDM_SSFL_110509

Method: 8015M
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
EB08-SA8N-SB-050311MS EB08-SA8N-SB-050311MSD (EB08-SA8N-SB-050311)	Propylene glycol	90	90	91.00-128.00	-	Propylene glycol	J (all detects) UJ (all non-detects)

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-015-SA8N-SB-4.0-5.0MS	DIETHYLENE GLYCOL	29	27	59.00-109.00	-	DIETHYLENE GLYCOL	J(all detects) UJ(all non-detects)
SL-015-SA8N-SB-4.0-5.0MSD	ETHYLENE GLYCOL	47	44	63.00-107.00	-	ETHYLENE GLYCOL	
(SL-015-SA8N-SB-4.0-5.0)	Propylene glycol	55	50	63.00-107.00	-	Propylene glycol	

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-015-SA8N-SB-4.0-5.0MS (DUP07-SA8N-QC-050311 SL-015-SA8N-SB-4.0-5.0 SL-016-SA8N-SB-3.0-4.0 SL-018-SA8N-SB-4.0-5.0 SL-019-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-9.0-10.0)	COPPER NICKEL	129 134	- -	75.00-125.00 75.00-125.00	- -	COPPER NICKEL	J(all detects)
SL-015-SA8N-SB-4.0-5.0MS SL-015-SA8N-SB-4.0-5.0MSD (DUP07-SA8N-QC-050311 SL-015-SA8N-SB-4.0-5.0 SL-016-SA8N-SB-3.0-4.0 SL-018-SA8N-SB-4.0-5.0 SL-019-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-9.0-10.0)	ZINC	154	29	75.00-125.00	21 (20.00)	ZINC	J(all detects) UJ(all non-detects) No Qual based on %R, >4x
SL-015-SA8N-SB-4.0-5.0MS SL-015-SA8N-SB-4.0-5.0MSD (DUP07-SA8N-QC-050311 SL-015-SA8N-SB-4.0-5.0 SL-016-SA8N-SB-3.0-4.0 SL-018-SA8N-SB-4.0-5.0 SL-019-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-9.0-10.0)	ANTIMONY ARSENIC BERYLLIUM CADMIUM CHROMIUM COBALT LEAD VANADIUM	69 136 - - - - - 142	60 70 74 - 56 - 59 32	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - 23 (20.00) 22 (20.00) - 22 (20.00) - 22 (20.00)	ANTIMONY ARSENIC BERYLLIUM CADMIUM CHROMIUM COBALT LEAD VANADIUM	J(all detects) UJ(all non-detects) V No Qual based on %R, >4x
SL-015-SA8N-SB-4.0-5.0MSD (DUP07-SA8N-QC-050311 SL-015-SA8N-SB-4.0-5.0 SL-016-SA8N-SB-3.0-4.0 SL-018-SA8N-SB-4.0-5.0 SL-019-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-9.0-10.0)	MOLYBDENUM	-	-	75.00-125.00	21 (20.00)	MOLYBDENUM	J(all detects) UJ(all non-detects)

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE142 **Laboratory: LL**

EDD Filename: DE142_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-015-SA8N-SB-4.0-5.0MS SL-015-SA8N-SB-4.0-5.0MSD (DUP07-SA8N-QC-050311 SL-015-SA8N-SB-4.0-5.0 SL-016-SA8N-SB-3.0-4.0 SL-018-SA8N-SB-4.0-5.0 SL-019-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-9.0-10.0)	BARIUM	149	-103	75.00-125.00	21 (20.00)	BARIUM	J(all detects) UJ(all non-detects) No Qual based on %R, >4x

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-015-SA8N-SB-4.0-5.0MS SL-015-SA8N-SB-4.0-5.0MSD (DUP07-SA8N-QC-050311 SL-015-SA8N-SB-4.0-5.0 SL-016-SA8N-SB-3.0-4.0 SL-018-SA8N-SB-4.0-5.0 SL-019-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-9.0-10.0)	ALUMINUM CALCIUM MAGNESIUM TITANIUM	2004 147 294 328	1508 - - 284	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - -	ALUMINUM CALCIUM MAGNESIUM TITANIUM	No Qual, >4x
SL-015-SA8N-SB-4.0-5.0MS SL-015-SA8N-SB-4.0-5.0MSD (DUP07-SA8N-QC-050311 SL-015-SA8N-SB-4.0-5.0 SL-016-SA8N-SB-3.0-4.0 SL-018-SA8N-SB-4.0-5.0 SL-019-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-9.0-10.0)	IRON MANGANESE	1899 -22	-251 47	75.00-125.00 75.00-125.00	- -	IRON MANGANESE	No Qual, >4x

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-015-SA8N-SB-4.0-5.0MS SL-015-SA8N-SB-4.0-5.0MSD (SL-015-SA8N-SB-4.0-5.0)	BENZIDINE	34	-	35.00-141.00	44 (30.00)	BENZIDINE	J(all detects) UJ(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE142 **Laboratory: LL**

EDD Filename: DE142_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **300.0**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-015-SA8N-SB-4.0-5.0MS (DUP07-SA8N-QC-050311 SL-015-SA8N-SB-4.0-5.0 SL-016-SA8N-SB-3.0-4.0 SL-018-SA8N-SB-4.0-5.0 SL-019-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-9.0-10.0)	FLUORIDE	60	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE142 **Laboratory: LL**

EDD Filename: DE142_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-015-SA8N-SB-4.0-5.0DUP (DUP07 -SA8N-QC-050311 SL -015-SA8N-SB-4.0-5.0 SL -016-SA8N-SB-3.0-4.0 SL -018-SA8N-SB-4.0-5.0 SL -019-SA8N-SB-4.0-5.0 SL -020-SA8N-SB-4.0-5.0 SL -020-SA8N-SB-9.0-10.0)	MANGANESE	32	20.00	J (all detects) UJ (all non-detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-015-SA8N-SB-4.0-5.0DUP (DUP07 -SA8N-QC-050311 SL -015-SA8N-SB-4.0-5.0 SL -016-SA8N-SB-3.0-4.0 SL -018-SA8N-SB-4.0-5.0 SL -019-SA8N-SB-4.0-5.0 SL -020-SA8N-SB-4.0-5.0 SL -020-SA8N-SB-9.0-10.0)	ANTIMONY	21	20.00	No Qual, OK by difference
	CADMIUM	23	20.00	
	SELENIUM	41	20.00	
	SILVER	47	20.00	
	THALLIUM	23	20.00	

Method: 7199
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-015-SA8N-SB-4.0-5.0DUP (DUP07 -SA8N-QC-050311 SL -015-SA8N-SB-4.0-5.0 SL -016-SA8N-SB-3.0-4.0 SL -018-SA8N-SB-4.0-5.0 SL -019-SA8N-SB-4.0-5.0 SL -020-SA8N-SB-4.0-5.0 SL -020-SA8N-SB-9.0-10.0)	HEXAVALENT CHROMIUM	51	20.00	No Qual, OK by difference

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE142 **Laboratory: LL**

EDD Filename: DE142_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P9WBLCSY261529 (EB08-SA8N-SB-050311)	4-NITROPHENOL BENZOIC ACID PHENOL	- - -	- - -	16.00-78.00 10.00-69.00 29.00-67.00	36 (30.00) 34 (30.00) 34 (30.00)	4-NITROPHENOL BENZOIC ACID PHENOL	J(all detects) UJ(all non-detects)

Method: 7470A
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P13013BQ220802 P13013BY220804 (EB08-SA8N-SB-050311)	MERCURY	86	88	90.00-115.00	-	MERCURY	J(all detects) UJ(all non-detects)

Method: 8315A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11446AQ240028A (SL-019-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-9.0-10.0)	FORMALDEHYDE	66	-	80.00-126.00	-	FORMALDEHYDE	J (all detects) UJ (all non-detects)

Method: 8260B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCSB48Q211301A (DUP07-SA8N-QC-050311 SL-015-SA8N-SB-4.0-5.0 SL-016-SA8N-SB-3.0-4.0 SL-018-SA8N-SB-4.0-5.0 SL-019-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-4.0-5.0 SL-020-SA8N-SB-9.0-10.0)	N-PROPYLBENZENE SEC-BUTYLBENZENE	122 121	- -	77.00-120.00 75.00-120.00	- -	N-PROPYLBENZENE SEC-BUTYLBENZENE	J(all detects)

Surrogate Outlier Report

Lab Reporting Batch ID: DE142 **Laboratory: LL**

EDD Filename: DE142_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8315A**
Matrix: **SO**

Sample ID	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-019-SA8N-SB-4.0-5.0	Butyraldehyde	58	64.00-126.00	All Target Analytes	J (all detects) UJ (all non-detects)
SL-020-SA8N-SB-4.0-5.0	Butyraldehyde	57	64.00-126.00	All Target Analytes	J(all detects) UJ(all non-detects)
SL-020-SA8N-SB-9.0-10.0	Butyraldehyde	51	64.00-126.00	All Target Analytes	J(all detects) UJ(all non-detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DE142 **Laboratory: LL**

EDD Filename: DE142_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-018-SA8N-SB-4.0-5.0	DUP07-SA8N-QC-050311			
MOISTURE	11.9	13.7	14		No Qualifiers Applied

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-018-SA8N-SB-4.0-5.0	DUP07-SA8N-QC-050311			
FLUORIDE	8.0	8.1	1	50.00	No Qualifiers Applied

Method: 6010B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-018-SA8N-SB-4.0-5.0	DUP07-SA8N-QC-050311			
ALUMINUM	24600	25900	5	50.00	
CALCIUM	3410	5490	47	50.00	
IRON	29700	32700	10	50.00	
LITHIUM	24.3	25.7	6	50.00	
MAGNESIUM	5330	7020	27	50.00	
MANGANESE	458	291	45	50.00	
POTASSIUM	2470	1870	28	50.00	No Qualifiers Applied
SODIUM	425	536	23	50.00	
STRONTIUM	22.7	29.2	25	50.00	
TIN	3.23	3.21	1	50.00	
TITANIUM	1170	1050	11	50.00	
Zirconium	5.27	5.79	9	50.00	
BORON	3.14	5.57 U	200	50.00	J(all detects)
PHOSPHORUS	108	237	75	50.00	UJ(all non-detects)

Method: 6020
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-018-SA8N-SB-4.0-5.0	DUP07-SA8N-QC-050311			
ANTIMONY	0.278	0.384	32	50.00	
ARSENIC	7.52	7.24	4	50.00	
BARIUM	136	142	4	50.00	
BERYLLIUM	0.970	0.944	3	50.00	
CADMIUM	0.116	0.136	16	50.00	
CHROMIUM	30.2	30.8	2	50.00	
COBALT	10.5	11.7	11	50.00	
COPPER	12.5	15.5	21	50.00	No Qualifiers Applied
LEAD	9.29	9.20	1	50.00	
MOLYBDENUM	0.627	0.431	37	50.00	
NICKEL	19.3	25.6	28	50.00	
SILVER	0.0574	0.0754	27	50.00	
THALLIUM	0.347	0.353	2	50.00	
VANADIUM	53.9	53.5	1	50.00	
ZINC	59.3	68.1	14	50.00	
SELENIUM	0.190	0.0914	70	50.00	J(all detects)

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Field Duplicate RPD Report

Lab Reporting Batch ID: DE142 Laboratory: LL

EDD Filename: DE142_v1 eQAPP Name: CDM_SSFL_110509

Method: 7471A
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-018-SA8N-SB-4.0-5.0	DUP07-SA8N-QC-050311			
MERCURY	0.110 U	0.0056	200	50.00	J(all detects) UJ(all non-detects)

Method: 8260B
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-018-SA8N-SB-4.0-5.0	DUP07-SA8N-QC-050311			
METHYLENE CHLORIDE	12	10	18	50.00	No Qualifiers Applied
TOLUENE	4.2 U	0.08	200	50.00	J(all detects) UJ(all non-detects)

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-018-SA8N-SB-4.0-5.0	DUP07-SA8N-QC-050311			
Di-n-octylphthalate	9.0	8.9	1	50.00	No Qualifiers Applied

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-018-SA8N-SB-4.0-5.0	DUP07-SA8N-QC-050311			
PH	7.84	7.84	0	50.00	No Qualifiers Applied

Method: ASTM D1498
Matrix: SO

Analyte	Concentration (mV)		Sample RPD	eQAPP RPD	Flag
	SL-018-SA8N-SB-4.0-5.0	DUP07-SA8N-QC-050311			
Oxidation Reduction Potential	366	390	6		No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: DE142 **Laboratory: LL**

EDD Filename: DE142_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1625C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-019-SA8N-SB-4.0-5.0	N-NITROSODIMETHYLAMINE	J	23.0	38.0	PQL	ng/Kg	J (all detects)
SL-020-SA8N-SB-4.0-5.0	N-NITROSODIMETHYLAMINE	J	28.5	38.8	PQL	ng/Kg	J (all detects)

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-020-SA8N-SB-4.0-5.0	Nitrate-NO3	J	1.1	1.8	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP07-SA8N-QC-050311	TIN	J	3.21	11.1	PQL	mg/Kg	J (all detects)
SL-015-SA8N-SB-4.0-5.0	TIN	J	3.22	11.5	PQL	mg/Kg	J (all detects)
SL-016-SA8N-SB-3.0-4.0	TIN Zirconium	J J	3.00 4.90	11.2 5.62	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-018-SA8N-SB-4.0-5.0	BORON TIN Zirconium	J J J	3.14 3.23 5.27	5.62 11.2 5.62	PQL PQL PQL	mg/Kg mg/Kg mg/Kg	J (all detects)
SL-019-SA8N-SB-4.0-5.0	TIN Zirconium	J J	2.85 5.39	11.3 5.66	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-020-SA8N-SB-4.0-5.0	BORON TIN	J J	1.53 2.86	5.74 11.5	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-020-SA8N-SB-9.0-10.0	BORON TIN	J J	4.28 2.98	5.96 11.9	PQL PQL	mg/Kg mg/Kg	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP07-SA8N-QC-050311	SELENIUM SILVER	J J	0.0914 0.0754	0.450 0.112	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-015-SA8N-SB-4.0-5.0	ANTIMONY CADMIUM SELENIUM SILVER	J J J J	0.200 0.107 0.116 0.0576	0.230 0.115 0.460 0.115	PQL PQL PQL PQL	mg/Kg mg/Kg mg/Kg mg/Kg	J (all detects)
SL-016-SA8N-SB-3.0-4.0	SELENIUM SILVER	J J	0.133 0.0368	0.459 0.115	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-018-SA8N-SB-4.0-5.0	SELENIUM SILVER	J J	0.190 0.0574	0.445 0.111	PQL PQL	mg/Kg mg/Kg	J (all detects)

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Reporting Limit Outliers

Lab Reporting Batch ID: DE142 **Laboratory: LL**

EDD Filename: DE142_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-019-SA8N-SB-4.0-5.0	ANTIMONY	J	0.217	0.226	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0961	0.453	PQL	mg/Kg	
	SILVER	J	0.0559	0.113	PQL	mg/Kg	
SL-020-SA8N-SB-4.0-5.0	SELENIUM	J	0.161	0.468	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0554	0.117	PQL	mg/Kg	
SL-020-SA8N-SB-9.0-10.0	SELENIUM	J	0.0968	0.472	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0414	0.118	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-015-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.83	1.2	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP07-SA8N-QC-050311	MERCURY	J	0.0056	0.109	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-019-SA8N-SB-4.0-5.0	EFH (C30-C40)	J	0.51	1.4	PQL	mg/Kg	J (all detects)
SL-020-SA8N-SB-4.0-5.0	EFH (C21-C30)	J	0.47	1.4	PQL	mg/Kg	J (all detects)
	EFH (C30-C40)	J	0.61	1.4	PQL	mg/Kg	
SL-020-SA8N-SB-9.0-10.0	EFH (C30-C40)	J	0.67	1.5	PQL	mg/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP07-SA8N-QC-050311	TOLUENE	J	0.08	3.9	PQL	ug/Kg	J (all detects)
SL-016-SA8N-SB-3.0-4.0	ACETONE	J	7.2	7.8	PQL	ug/Kg	J (all detects)
SL-019-SA8N-SB-4.0-5.0	ACETONE	J	8.3	8.9	PQL	ug/Kg	J (all detects)
	CHLOROFORM	J	0.15	4.4	PQL	ug/Kg	
SL-020-SA8N-SB-9.0-10.0	TOLUENE	J	0.09	4.6	PQL	ug/Kg	J (all detects)
	VINYL CHLORIDE	J	0.27	4.6	PQL	ug/Kg	

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Reporting Limit Outliers

Lab Reporting Batch ID: DE142 **Laboratory: LL**

EDD Filename: DE142_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8270C SIM**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP07-SA8N-QC-050311	Di-n-octylphthalate	J	8.9	21	PQL	ug/Kg	J (all detects)
SL-015-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	8.2	21	PQL	ug/Kg	J (all detects)
	Di-n-butylphthalate	J	8.1	21	PQL	ug/Kg	
	Di-n-octylphthalate	J	9.7	21	PQL	ug/Kg	
SL-016-SA8N-SB-3.0-4.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	16	21	PQL	ug/Kg	J (all detects)
	Di-n-octylphthalate	J	9.2	21	PQL	ug/Kg	
SL-018-SA8N-SB-4.0-5.0	Di-n-octylphthalate	J	9.0	20	PQL	ug/Kg	J (all detects)
SL-019-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	10	20	PQL	ug/Kg	J (all detects)
	Di-n-octylphthalate	J	9.1	20	PQL	ug/Kg	
SL-020-SA8N-SB-9.0-10.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	9.1	22	PQL	ug/Kg	J (all detects)
	Di-n-octylphthalate	J	9.8	22	PQL	ug/Kg	

LDC #: 26275G4 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/29/11
SDG #: DE142 ADR Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6010B/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 5/3/11
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	N	gR9out. RP9out.
VI.	Matrix Spike Analysis	SW	Al, Ba, Ca, Fe, Mg, Mn, Ti, V, Zn >4X
VII.	Duplicate Sample Analysis	SW	Sb, Cd, Se, Ag, Tl, <5X
VIII.	Laboratory Control Samples (LCS)	N A	SW
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	Ba, Ca, Cr, Co, Cu, Pb, Ni, V. J/UJ
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	ND	EB=7

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	SL-015-SA8N-SB-4.0-5.0	11	SL-015-SA8N-SB-4.0-5.0DUP	21		31	
2	SL-016-SA8N-SB-3.0-4.0	12		22		32	
3	SL-018-SA8N-SB-4.0-5.0	13		23		33	
4	SL-019-SA8N-SB-4.0-5.0	14		24		34	
5	SL-020-SA8N-SB-4.0-5.0	15		25		35	
6	SL-020-SA8N-SB-9.0-10.0	16		26		36	
7	EB08-SA8N-SB-050311	17		27		37	
8	DUP07-SA8N-QC-050311	18		28		38	
9	SL-015-SA8N-SB-4.0-5.0MS	19		29		39	
10	SL-015-SA8N-SB-4.0-5.0MSD	20		30		40	

Notes:

LDC #: 26275G4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000)
Soil preparation factor applied: 200X
Sample Concentration units, unless otherwise noted: mg/Kg
Associated Samples: All Soil

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	1	2	3	4	5	6	8			
Se			0.33	0.33	0.12	0.13	0.19	0.096	0.16	0.097	0.091			

Sample Concentration units, unless otherwise noted: mg/Kg
Associated Samples: 5,6,8

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	8									
Be			0.058	0.058										
Cd			0.21	0.21	0.14									
V			0.23	0.23										

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".
Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: DE142
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6275761BKG Matrix Spike Lab Sample ID: 6275762MS Matrix Spike Duplicate Lab Sample ID: 6275763MSD
% Solids for Sample: 85.3
Batch Id(s): P12508A, P12526A, P12511B

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	RPD	M
Aluminum		25357.2478		29963.1876		28790.4665		229.8692	227.6375	MG/KG	2004		1508		4			20	P
Antimony	121	0.1999	B	1.1577		1.0144		1.3929	1.3658	MG/KG	69	N	60	N	13		75 - 125	20	MS
Arsenic	75	6.8501		10.0147		8.4385		2.3215	2.2764	MG/KG	136	N	70	N	17		75 - 125	20	MS
Barium	137	132.5426		149.8497		120.8300		11.6073	11.3819	MG/KG	149		-103		21	*		20	MS
Beryllium	9	0.8298		1.9041		1.5063		0.9286	0.9105	MG/KG	116		74	N	23	*	75 - 125	20	MS
Boron		1.0229	U	219.9159		216.0997		229.8692	227.6375	MG/KG	96		95		2		84 - 115	20	P
Cadmium	111	0.1072	B	1.4367		1.1491		1.1607	1.1382	MG/KG	115		92		22	*	75 - 125	20	MS
Calcium		4827.4809		5505.0548		5302.4653		459.7384	455.2749	MG/KG	147		104		4			20	P
Chromium	52	28.2279		42.1343		34.5554		11.6073	11.3819	MG/KG	120		56	N	20		75 - 125	20	MS
Cobalt	59	8.9672		79.3936		63.5564		58.0363	56.9094	MG/KG	121		96		22	*	75 - 125	20	MS
Copper	63	11.7049		26.6503		21.7098		11.6073	11.3819	MG/KG	129	N	88		20		75 - 125	20	MS
Iron		31697.2278		33879.7324		31411.8360		114.9346	113.8187	MG/KG	1899		-251		8			20	P
Lead	208	8.0960		11.8046		10.1276		3.4822	3.4146	MG/KG	107		59	N	15		75 - 125	20	MS
Lithium		23.9420		136.3113		134.3004		114.9346	113.8187	MG/KG	98		97		1		82 - 114	20	P
Magnesium		6897.6737		7572.3766		7121.9340		229.8692	227.6375	MG/KG	294		99		6			20	P
Manganese		489.4835		477.0223		516.2180		57.4673	56.9094	MG/KG	-22		47		8			20	P
Mercury		0.0035	U	0.1951		0.1926		0.1858	0.1834	MG/KG	105		105		1		65 - 135	20	CV
Molybdenum	98	0.2929		13.6223		11.0381		11.6073	11.3819	MG/KG	115		94		21	*	75 - 125	20	MS
Nickel	60	21.1641		36.7254		30.1392		11.6073	11.3819	MG/KG	134	N	79		20		75 - 125	20	MS
Phosphorus		149.7219		276.5269		267.9077		114.9346	113.8187	MG/KG	110		104		3		75 - 125	20	P
Potassium		1789.6214		3150.4816		3058.9205		1149.3460	1138.1873	MG/KG	118		112		3		75 - 125	20	P
Selenium	78	0.1159	B	2.3284		2.1687		2.3215	2.2764	MG/KG	95		90		7		75 - 125	20	MS
Silver	107	0.0576	B	13.9775		11.5321		11.6073	11.3819	MG/KG	120		101		19		75 - 125	20	MS
Sodium		465.9920		1556.6467		1508.8278		1149.3460	1138.1873	MG/KG	95		92		3		75 - 125	20	P
Strontium		26.6936		139.3318		133.7336		114.9346	113.8187	MG/KG	98		94		4		75 - 115	20	P
Thallium	203	0.2694		0.8476		0.7123		0.4643	0.4553	MG/KG	125		97		17		75 - 125	20	MS
Tin		3.2182	B	431.7323		426.2181		459.7384	455.2749	MG/KG	93		93		1		80 - 110	20	P
Titanium		1270.4101		1647.4875		1593.6967		114.9346	113.8187	MG/KG	328		284		3			20	P
Vanadium	51	49.6517		66.1614		53.2444		11.6073	11.3819	MG/KG	142		32		22	*		20	MS
Zinc	66	59.4212		77.3275		62.7369		11.6073	11.3819	MG/KG	154		29		21	*		20	MS
Zirconium		6.2501		116.6138		115.1163		114.9346	113.8187	MG/KG	96		96		1		75 - 125	20	P

METHODS:
P = ICP (Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: DE142
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6275761BKG Serial Dilution Lab Sample ID: 6275761L
Batch ID(s): P12508A, P12526A
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		220623.2700		228673.6000		4		P
Antimony	121	0.8696	B	2.1010	B	142		MS
Arsenic	75	29.8000		41.3950		39		MS
Barium	137	576.6000		729.0000		26	E	MS
Beryllium	9	3.6100		4.9570		37		MS
Boron		8.9000	U	44.5000	U			P
Cadmium	111	0.4665	B	1.0000	U	100		MS
Calcium		42001.9800		46467.7500		11	E	P
Chromium	52	122.8000		186.5000		52	E	MS
Cobalt	59	39.0100		67.9500		74	E	MS
Copper	63	50.9200		71.8000		41	E	MS
Iron		55156.9800		56236.5000		2		P
Lead	208	35.2200		48.8200		39	E	MS
Lithium		208.3100		228.0500		9		P
Magnesium		60013.9000		62313.2500		4		P
Manganese		4258.8000		4522.2500		6		P
Molybdenum	98	1.2740		4.5550		258		MS
Nickel	60	92.0700		126.7000		38	E	MS
Phosphorus		1302.6700		1411.0000		8		P
Potassium		15570.7800		15927.2000		2		P
Selenium	78	0.5040	B	1.2625	B	150		MS
Silver	107	0.2507	B	2.8385		1032		MS
Sodium		4054.4100		4067.4000	B	0		P
Strontium		232.2500		236.5500		2		P
Thallium	203	1.1720		1.4630	B	25		MS
Tin		28.0000	B	50.0000	U	100		P
Titanium		11053.3300		11481.8000		4		P
Vanadium	51	216.0000		318.6000		48	E	MS
Zinc	66	258.5000		546.0000		111		MS
Zirconium		54.3800		47.8500	B	12		P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS: DE142 3617
U= Below MDL
B= Below LOQ

FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

SAMPLE DELIVERY GROUP

DE143

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
04-May-2011	TB-050411	6277631	TB	5030B	8015M	III
04-May-2011	TB-050411	6277631	TB	5030B	8260B	III
04-May-2011	TB-050411	6277631	TB	5030B	8260B SIM	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0	6277627	N	3050B	6010B	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0	6277627	N	3050B	6020	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0	6277627	N	3060A	7199	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0	6277627	N	3546	1625C	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0	6277627	N	3550B	8015B	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0	6277627	N	3550B	8015M	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0	6277627	N	3550B	8082	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0	6277627	N	3550B	8270C	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0	6277627	N	3550B	8270C SIM	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0	6277627	N	5035	8015M	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0	6277627	N	5035	8260B	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0	6277627	N	5035	8260B SIM	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0	6277627	N	8330	8330A	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0	6277627	N	METHOD	300.0	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0	6277627	N	METHOD	314.0	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0	6277627	N	METHOD	6850	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0	6277627	N	METHOD	7471A	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0	6277627	N	METHOD	8015B	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0	6277627	N	METHOD	8015M	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0	6277627	N	METHOD	8315A	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0	6277627	N	METHOD	9012B	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0DUP	P277627D221012	DUP	3050B	6010B	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0DUP	P277627D272126A	DUP	METHOD	314.0	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
04-May-2011	SL-021-SA8N-SB-4.0-5.0DUP	P277627D272150A	DUP	METHOD	300.0	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0MSD	P277627M221020	MSD	3050B	6010B	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0MSD	P277627M241725A	MSD	3550B	8082	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0MSD	P277627M242033A	MSD	METHOD	8315A	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0MSD	P277627M321146A	MSD	3550B	8015M	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0MSD	P277627M321714A	MSD	METHOD	8015B	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0MS	P277627R221016	MS	3050B	6010B	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0MS	P277627R241707A	MS	3550B	8082	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0MS	P277627R242023A	MS	METHOD	8315A	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0MS	P277627R272148A	MS	METHOD	314.0	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0MS	P277627R272205A	MS	METHOD	300.0	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0MS	P277627R321121A	MS	3550B	8015M	III
04-May-2011	SL-021-SA8N-SB-4.0-5.0MS	P277627R321659A	MS	METHOD	8015B	III
04-May-2011	SL-021-SA8N-SB-9.0-10.0	6277628	N	3050B	6010B	III
04-May-2011	SL-021-SA8N-SB-9.0-10.0	6277628	N	3050B	6020	III
04-May-2011	SL-021-SA8N-SB-9.0-10.0	6277628	N	3060A	7199	III
04-May-2011	SL-021-SA8N-SB-9.0-10.0	6277628	N	3546	1625C	III
04-May-2011	SL-021-SA8N-SB-9.0-10.0	6277628	N	3550B	8015B	III
04-May-2011	SL-021-SA8N-SB-9.0-10.0	6277628	N	3550B	8015M	III
04-May-2011	SL-021-SA8N-SB-9.0-10.0	6277628	N	3550B	8082	III
04-May-2011	SL-021-SA8N-SB-9.0-10.0	6277628	N	3550B	8270C	III
04-May-2011	SL-021-SA8N-SB-9.0-10.0	6277628	N	3550B	8270C SIM	III
04-May-2011	SL-021-SA8N-SB-9.0-10.0	6277628	N	5035	8015M	III
04-May-2011	SL-021-SA8N-SB-9.0-10.0	6277628	N	5035	8260B	III
04-May-2011	SL-021-SA8N-SB-9.0-10.0	6277628	N	5035	8260B SIM	III
04-May-2011	SL-021-SA8N-SB-9.0-10.0	6277628	N	8330	8330A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
04-May-2011	SL-021-SA8N-SB-9.0-10.0	6277628	N	METHOD	300.0	III
04-May-2011	SL-021-SA8N-SB-9.0-10.0	6277628	N	METHOD	314.0	III
04-May-2011	SL-021-SA8N-SB-9.0-10.0	6277628	N	METHOD	7471A	III
04-May-2011	SL-021-SA8N-SB-9.0-10.0	6277628	N	METHOD	8015B	III
04-May-2011	SL-021-SA8N-SB-9.0-10.0	6277628	N	METHOD	8015M	III
04-May-2011	SL-021-SA8N-SB-9.0-10.0	6277628	N	METHOD	8315A	III
04-May-2011	SL-021-SA8N-SB-9.0-10.0	6277628	N	METHOD	9012B	III
04-May-2011	SL-080-SA8N-SB-4.0-5.0	6277629	N	3050B	6010B	III
04-May-2011	SL-080-SA8N-SB-4.0-5.0	6277629	N	3050B	6020	III
04-May-2011	SL-080-SA8N-SB-4.0-5.0	6277629	N	3060A	7199	III
04-May-2011	SL-080-SA8N-SB-4.0-5.0	6277629	N	3546	1625C	III
04-May-2011	SL-080-SA8N-SB-4.0-5.0	6277629	N	3550B	8015B	III
04-May-2011	SL-080-SA8N-SB-4.0-5.0	6277629	N	3550B	8015M	III
04-May-2011	SL-080-SA8N-SB-4.0-5.0	6277629	N	3550B	8082	III
04-May-2011	SL-080-SA8N-SB-4.0-5.0	6277629	N	3550B	8270C	III
04-May-2011	SL-080-SA8N-SB-4.0-5.0	6277629	N	3550B	8270C SIM	III
04-May-2011	SL-080-SA8N-SB-4.0-5.0	6277629	N	5035	8015M	III
04-May-2011	SL-080-SA8N-SB-4.0-5.0	6277629	N	5035	8260B	III
04-May-2011	SL-080-SA8N-SB-4.0-5.0	6277629	N	5035	8260B SIM	III
04-May-2011	SL-080-SA8N-SB-4.0-5.0	6277629	N	8330	8330A	III
04-May-2011	SL-080-SA8N-SB-4.0-5.0	6277629	N	METHOD	300.0	III
04-May-2011	SL-080-SA8N-SB-4.0-5.0	6277629	N	METHOD	314.0	III
04-May-2011	SL-080-SA8N-SB-4.0-5.0	6277629	N	METHOD	7471A	III
04-May-2011	SL-080-SA8N-SB-4.0-5.0	6277629	N	METHOD	8015B	III
04-May-2011	SL-080-SA8N-SB-4.0-5.0	6277629	N	METHOD	8015M	III
04-May-2011	SL-080-SA8N-SB-4.0-5.0	6277629	N	METHOD	8315A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
04-May-2011	SL-080-SA8N-SB-4.0-5.0	6277629	N	METHOD	9012B	III
04-May-2011	SL-080-SA8N-SB-4.0-5.0DUP	P277629D270932B	DUP	METHOD	9012B	III
04-May-2011	SL-080-SA8N-SB-4.0-5.0MS	P277629R270933B	MS	METHOD	9012B	III
04-May-2011	SL-067-SA8N-SB-4.0-5.0	6277630	N	3050B	6010B	III
04-May-2011	SL-067-SA8N-SB-4.0-5.0	6277630	N	3050B	6020	III
04-May-2011	SL-067-SA8N-SB-4.0-5.0	6277630	N	3060A	7199	III
04-May-2011	SL-067-SA8N-SB-4.0-5.0	6277630	N	3546	1625C	III
04-May-2011	SL-067-SA8N-SB-4.0-5.0	6277630	N	3550B	8015B	III
04-May-2011	SL-067-SA8N-SB-4.0-5.0	6277630	N	3550B	8015M	III
04-May-2011	SL-067-SA8N-SB-4.0-5.0	6277630	N	3550B	8082	III
04-May-2011	SL-067-SA8N-SB-4.0-5.0	6277630	N	3550B	8270C	III
04-May-2011	SL-067-SA8N-SB-4.0-5.0	6277630	N	3550B	8270C SIM	III
04-May-2011	SL-067-SA8N-SB-4.0-5.0	6277630	N	5035	8015M	III
04-May-2011	SL-067-SA8N-SB-4.0-5.0	6277630	N	5035	8260B	III
04-May-2011	SL-067-SA8N-SB-4.0-5.0	6277630	N	5035	8260B SIM	III
04-May-2011	SL-067-SA8N-SB-4.0-5.0	6277630	N	8330	8330A	III
04-May-2011	SL-067-SA8N-SB-4.0-5.0	6277630	N	METHOD	300.0	III
04-May-2011	SL-067-SA8N-SB-4.0-5.0	6277630	N	METHOD	314.0	III
04-May-2011	SL-067-SA8N-SB-4.0-5.0	6277630	N	METHOD	6850	III
04-May-2011	SL-067-SA8N-SB-4.0-5.0	6277630	N	METHOD	7471A	III
04-May-2011	SL-067-SA8N-SB-4.0-5.0	6277630	N	METHOD	8015B	III
04-May-2011	SL-067-SA8N-SB-4.0-5.0	6277630	N	METHOD	8015M	III
04-May-2011	SL-067-SA8N-SB-4.0-5.0	6277630	N	METHOD	8315A	III
04-May-2011	SL-067-SA8N-SB-4.0-5.0	6277630	N	METHOD	9012B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE143 **Laboratory:** LL

EDD Filename: PrepDE143_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-021-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 9:15:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.9		0.94	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-021-SA8N-SB-9.0-10.0 *Collected:* 5/4/2011 9:25:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.8		0.94	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-067-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 2:35:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.2		0.97	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-080-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 10:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.1		0.92	MDL	1.1	PQL	mg/Kg	J	Q

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-021-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 9:15:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3860		21.1	MDL	58.5	PQL	mg/Kg	J	Q
TIN	2.60	J	1.17	MDL	11.7	PQL	mg/Kg	U	B
Zirconium	2.05	J	0.982	MDL	5.85	PQL	mg/Kg	J	Z

Sample ID: SL-021-SA8N-SB-9.0-10.0 *Collected:* 5/4/2011 9:25:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	2590		21.2	MDL	58.8	PQL	mg/Kg	J	Q
TIN	2.67	J	1.18	MDL	11.8	PQL	mg/Kg	U	B
Zirconium	3.39	J	0.987	MDL	5.88	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE143 **Laboratory: LL**

EDD Filename: PrepDE143_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-067-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 2:35:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	4720		21.7	MDL	60.4	PQL	mg/Kg	J	Q
TIN	2.79	J	1.21	MDL	12.1	PQL	mg/Kg	U	B
Zirconium	3.21	J	1.01	MDL	6.04	PQL	mg/Kg	J	Z

Sample ID: SL-080-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 10:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	4060		20.1	MDL	55.7	PQL	mg/Kg	J	Q
TIN	2.41	J	1.11	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	2.28	J	0.936	MDL	5.57	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-021-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 9:15:00 AM *Analysis Type:* REA *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	94.0		0.378	MDL	2.29	PQL	mg/Kg	J	Q, E

Sample ID: SL-021-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 9:15:00 AM *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.159	J	0.0459	MDL	0.459	PQL	mg/Kg	J	Z

Sample ID: SL-021-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 9:15:00 AM *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.291		0.0573	MDL	0.115	PQL	mg/Kg	J	E

Sample ID: SL-021-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 9:15:00 AM *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	142		0.124	MDL	0.459	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE143 **Laboratory:** LL

EDD Filename: PrepDE143_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-021-SA8N-SB-4.0-5.0 ***Collected:*** 5/4/2011 9:15:00 AM ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0765	J	0.0688	MDL	0.229	PQL	mg/Kg	J	Z, Q, E
ARSENIC	6.25		0.0917	MDL	0.459	PQL	mg/Kg	J	E
BERYLLIUM	0.831		0.0183	MDL	0.115	PQL	mg/Kg	J	E
CADMIUM	0.290		0.0459	MDL	0.115	PQL	mg/Kg	J	Q, E
CHROMIUM	29.0		0.138	MDL	0.459	PQL	mg/Kg	J	Q, E
COBALT	10.5		0.0229	MDL	0.115	PQL	mg/Kg	J	Q, E
LEAD	9.49		0.0119	MDL	0.229	PQL	mg/Kg	J	E
NICKEL	20.7		0.115	MDL	0.459	PQL	mg/Kg	J	Q, E
SILVER	0.0358	J	0.0138	MDL	0.115	PQL	mg/Kg	J	Z, Q
VANADIUM	51.6		0.0252	MDL	0.115	PQL	mg/Kg	J	E
ZINC	65.7		0.642	MDL	3.44	PQL	mg/Kg	J	E

Sample ID: SL-021-SA8N-SB-9.0-10.0 ***Collected:*** 5/4/2011 9:25:00 AM ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.117	J	0.0470	MDL	0.470	PQL	mg/Kg	J	Z

Sample ID: SL-021-SA8N-SB-9.0-10.0 ***Collected:*** 5/4/2011 9:25:00 AM ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.263		0.0588	MDL	0.118	PQL	mg/Kg	J	E

Sample ID: SL-021-SA8N-SB-9.0-10.0 ***Collected:*** 5/4/2011 9:25:00 AM ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	152		0.127	MDL	0.470	PQL	mg/Kg	J	E

Sample ID: SL-021-SA8N-SB-9.0-10.0 ***Collected:*** 5/4/2011 9:25:00 AM ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.149	J	0.0705	MDL	0.235	PQL	mg/Kg	J	Z, Q, E
ARSENIC	8.04		0.0940	MDL	0.470	PQL	mg/Kg	J	E
BERYLLIUM	1.03		0.0188	MDL	0.118	PQL	mg/Kg	J	E
CADMIUM	0.474		0.0470	MDL	0.118	PQL	mg/Kg	J	Q, E
CHROMIUM	39.5		0.141	MDL	0.470	PQL	mg/Kg	J	Q, E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE143 **Laboratory: LL**

EDD Filename: PrepDE143_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-021-SA8N-SB-9.0-10.0 ***Collected:*** 5/4/2011 9:25:00 AM ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	13.3		0.0235	MDL	0.118	PQL	mg/Kg	J	Q, E
COPPER	16.6		0.0776	MDL	0.470	PQL	mg/Kg	J	Q, E
LEAD	10.9		0.0122	MDL	0.235	PQL	mg/Kg	J	E
NICKEL	25.9		0.118	MDL	0.470	PQL	mg/Kg	J	Q, E
SILVER	0.0810	J	0.0141	MDL	0.118	PQL	mg/Kg	J	Z, Q
VANADIUM	84.4		0.0259	MDL	0.118	PQL	mg/Kg	J	E
ZINC	81.1		0.658	MDL	3.53	PQL	mg/Kg	J	E

Sample ID: SL-067-SA8N-SB-4.0-5.0 ***Collected:*** 5/4/2011 2:35:00 PM ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.183	J	0.0460	MDL	0.460	PQL	mg/Kg	J	Z

Sample ID: SL-067-SA8N-SB-4.0-5.0 ***Collected:*** 5/4/2011 2:35:00 PM ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.360		0.0575	MDL	0.115	PQL	mg/Kg	J	E

Sample ID: SL-067-SA8N-SB-4.0-5.0 ***Collected:*** 5/4/2011 2:35:00 PM ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	166		0.124	MDL	0.460	PQL	mg/Kg	J	E

Sample ID: SL-067-SA8N-SB-4.0-5.0 ***Collected:*** 5/4/2011 2:35:00 PM ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.145	J	0.0690	MDL	0.230	PQL	mg/Kg	J	Z, Q, E
ARSENIC	6.59		0.0920	MDL	0.460	PQL	mg/Kg	J	E
BERYLLIUM	0.977		0.0184	MDL	0.115	PQL	mg/Kg	J	E
CADMIUM	0.294		0.0460	MDL	0.115	PQL	mg/Kg	J	Q, E
CHROMIUM	35.5		0.138	MDL	0.460	PQL	mg/Kg	J	Q, E
COBALT	14.3		0.0230	MDL	0.115	PQL	mg/Kg	J	Q, E
COPPER	20.2		0.0759	MDL	0.460	PQL	mg/Kg	J	Q, E
LEAD	11.0		0.0120	MDL	0.230	PQL	mg/Kg	J	E
NICKEL	26.4		0.115	MDL	0.460	PQL	mg/Kg	J	Q, E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE143 **Laboratory: LL**

EDD Filename: PrepDE143_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-067-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 2:35:00 PM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0517	J	0.0138	MDL	0.115	PQL	mg/Kg	J	Z, Q
VANADIUM	79.3		0.0253	MDL	0.115	PQL	mg/Kg	J	E
ZINC	90.9		0.644	MDL	3.45	PQL	mg/Kg	J	E

Sample ID: SL-080-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 10:40:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.167	J	0.0455	MDL	0.455	PQL	mg/Kg	J	Z

Sample ID: SL-080-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 10:40:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.665		0.0568	MDL	0.114	PQL	mg/Kg	J	E

Sample ID: SL-080-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 10:40:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	149		0.123	MDL	0.455	PQL	mg/Kg	J	E

Sample ID: SL-080-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 10:40:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.170	J	0.0682	MDL	0.227	PQL	mg/Kg	J	Z, Q, E
ARSENIC	6.59		0.0909	MDL	0.455	PQL	mg/Kg	J	E
BERYLLIUM	1.01		0.0182	MDL	0.114	PQL	mg/Kg	J	E
CADMIUM	0.404		0.0455	MDL	0.114	PQL	mg/Kg	J	Q, E
CHROMIUM	32.0		0.136	MDL	0.455	PQL	mg/Kg	J	Q, E
COBALT	12.9		0.0227	MDL	0.114	PQL	mg/Kg	J	Q, E
COPPER	19.6		0.0750	MDL	0.455	PQL	mg/Kg	J	Q, E
LEAD	10.6		0.0118	MDL	0.227	PQL	mg/Kg	J	E
NICKEL	23.6		0.114	MDL	0.455	PQL	mg/Kg	J	Q, E
SILVER	0.0473	J	0.0136	MDL	0.114	PQL	mg/Kg	J	Z, Q
VANADIUM	61.8		0.0250	MDL	0.114	PQL	mg/Kg	J	E
ZINC	74.0		0.637	MDL	3.41	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE143 **Laboratory:** LL

EDD Filename: PrepDE143_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: SL-067-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 2:35:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.41	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-080-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 10:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.40	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 1625C **Matrix:** SO

Sample ID: SL-021-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 9:15:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	34.1	J	19.2	MDL	38.5	PQL	ng/Kg	J	Z

Method Category: SVOA

Method: 8015M **Matrix:** SO

Sample ID: SL-021-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 9:15:00 AM *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIETHYLENE GLYCOL	5.8	U	5.8	MDL	12	PQL	mg/Kg	UJ	Q
ETHYLENE GLYCOL	5.8	U	5.8	MDL	12	PQL	mg/Kg	UJ	Q
Propylene glycol	5.8	U	5.8	MDL	12	PQL	mg/Kg	UJ	Q

Sample ID: SL-021-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 9:15:00 AM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.58	J	0.47	MDL	1.4	PQL	mg/Kg	J	Z
EFH (C21-C30)	1.4	J	0.47	MDL	1.4	PQL	mg/Kg	J	L

Sample ID: SL-021-SA8N-SB-9.0-10.0 *Collected:* 5/4/2011 9:25:00 AM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.49	J	0.47	MDL	1.4	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE143 **Laboratory: LL**

EDD Filename: PrepDE143_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-021-SA8N-SB-9.0-10.0 *Collected:* 5/4/2011 9:25:00 AM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	1.8		0.47	MDL	1.4	PQL	mg/Kg	J	L

Sample ID: SL-067-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 2:35:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	1.3	J	0.48	MDL	1.4	PQL	mg/Kg	J	Z, L

Sample ID: SL-080-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 10:40:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.65	J	0.46	MDL	1.4	PQL	mg/Kg	J	Z
EFH (C21-C30)	8.2		0.46	MDL	1.4	PQL	mg/Kg	J	L

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-067-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 2:35:00 PM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	25	J	20	MDL	400	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-021-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 9:15:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	9.6	J	6.9	MDL	21	PQL	ug/Kg	J	Z
Di-n-octylphthalate	9.2	J	6.9	MDL	21	PQL	ug/Kg	J	Z

Sample ID: SL-021-SA8N-SB-9.0-10.0 *Collected:* 5/4/2011 9:25:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	7.1	J	7.0	MDL	21	PQL	ug/Kg	J	Z
Butylbenzylphthalate	19	J	7.0	MDL	21	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE143 **Laboratory: LL**

EDD Filename: PrepDE143_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-021-SA8N-SB-9.0-10.0 *Collected:* 5/4/2011 9:25:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Di-n-octylphthalate	9.0	J	7.0	MDL	21	PQL	ug/Kg	J	Z

Sample ID: SL-067-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 2:35:00 PM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	1.0	J	0.80	MDL	2.0	PQL	ug/Kg	J	Z
Di-n-octylphthalate	9.3	J	7.2	MDL	22	PQL	ug/Kg	J	Z

Sample ID: SL-080-SA8N-SB-4.0-5.0 *Collected:* 5/4/2011 10:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	1.3	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	6.8	J	6.8	MDL	20	PQL	ug/Kg	J	Z
Di-n-octylphthalate	9.2	J	6.8	MDL	20	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE143 **Laboratory: LL**

EDD Filename: PrepDE143_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE143 **Laboratory: LL**

EDD Filename: PrepDE143_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE143 **Laboratory: LL**

EDD Filename: PrepDE143_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

DE143

Method Blank Outlier Report

Lab Reporting Batch ID: DE143 **Laboratory: LL**

EDD Filename: DE143_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P12908AB220953	5/10/2011 9:53:00 AM	ALUMINUM CALCIUM MAGNESIUM PHOSPHORUS TIN	12.4 mg/Kg 17.6 mg/Kg 3.88 mg/Kg 2.28 mg/Kg 1.46 mg/Kg	SL-021-SA8N-SB-4.0-5.0 SL-021-SA8N-SB-9.0-10.0 SL-067-SA8N-SB-4.0-5.0 SL-080-SA8N-SB-4.0-5.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-021-SA8N-SB-4.0-5.0(RES)	TIN	2.60 mg/Kg	2.60U mg/Kg
SL-021-SA8N-SB-9.0-10.0(RES)	TIN	2.67 mg/Kg	2.67U mg/Kg
SL-067-SA8N-SB-4.0-5.0(RES)	TIN	2.79 mg/Kg	2.79U mg/Kg
SL-080-SA8N-SB-4.0-5.0(RES)	TIN	2.41 mg/Kg	2.41U mg/Kg

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P12926AB220810A	5/13/2011 8:10:00 AM	COPPER	0.503 mg/Kg	SL-021-SA8N-SB-4.0-5.0 SL-021-SA8N-SB-9.0-10.0 SL-067-SA8N-SB-4.0-5.0 SL-080-SA8N-SB-4.0-5.0
P12926AB221123A	5/11/2011 11:23:00 AM	VANADIUM ZINC	0.0744 mg/Kg 0.738 mg/Kg	SL-021-SA8N-SB-4.0-5.0 SL-021-SA8N-SB-9.0-10.0 SL-067-SA8N-SB-4.0-5.0 SL-080-SA8N-SB-4.0-5.0

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB48B211237A	5/6/2011 12:37:00 PM	TOLUENE	0.09 ug/Kg	SL-021-SA8N-SB-4.0-5.0 SL-021-SA8N-SB-9.0-10.0 SL-067-SA8N-SB-4.0-5.0 SL-080-SA8N-SB-4.0-5.0

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE143 **Laboratory: LL**

EDD Filename: DE143_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-021-SA8N-SB-4.0-5.0MS	DIETHYLENE GLYCOL	36	40	59.00-109.00	-	DIETHYLENE GLYCOL	J (all detects)
SL-021-SA8N-SB-4.0-5.0MSD	ETHYLENE GLYCOL	54	58	63.00-107.00	-	ETHYLENE GLYCOL	UJ (all non-detects)
(SL-021-SA8N-SB-4.0-5.0)	Propylene glycol	60	-	63.00-107.00	-	Propylene glycol	

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-021-SA8N-SB-4.0-5.0MS	ALUMINUM	2053	2307	75.00-125.00	-	ALUMINUM	
SL-021-SA8N-SB-4.0-5.0MSD	IRON	4092	320	75.00-125.00	-	IRON	
(SL-021-SA8N-SB-4.0-5.0	MAGNESIUM	266	250	75.00-125.00	-	MAGNESIUM	J(all detects)
SL-021-SA8N-SB-9.0-10.0	POTASSIUM	-	135	75.00-125.00	-	POTASSIUM	Al, Fe, Mg
SL-067-SA8N-SB-4.0-5.0							No Qual, >4x
SL-080-SA8N-SB-4.0-5.0)							
SL-021-SA8N-SB-4.0-5.0MSD	CALCIUM	-	70	75.00-125.00	-	CALCIUM	
(SL-021-SA8N-SB-4.0-5.0	MANGANESE	-	61	75.00-125.00	-	MANGANESE	No Qual, >4x
SL-021-SA8N-SB-9.0-10.0							
SL-067-SA8N-SB-4.0-5.0							
SL-080-SA8N-SB-4.0-5.0)							

Method: 300.0
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-021-SA8N-SB-4.0-5.0MS	FLUORIDE	54	-	80.00-120.00	-	FLUORIDE	
(SL-021-SA8N-SB-4.0-5.0							J(all detects)
SL-021-SA8N-SB-9.0-10.0							UJ(all non-detects)
SL-067-SA8N-SB-4.0-5.0							
SL-080-SA8N-SB-4.0-5.0)							

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE143 **Laboratory: LL**

EDD Filename: DE143_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	*Analyte*	*Sample RPD*	*eQAPP RPD*	*Flag*
SL-021-SA8N-SB-4.0-5.0DUP (SL-021-SA8N-SB-4.0-5.0 SL -021-SA8N-SB-9.0-10.0 SL -067-SA8N-SB-4.0-5.0 SL -080-SA8N-SB-4.0-5.0)	FLUORIDE	44	20.00	No Qual, OK by difference

Method: 6010B
Matrix: SO

QC Sample ID (Associated Sample ID)	*Analyte*	*Sample RPD*	*eQAPP RPD*	*Flag*
SL-021-SA8N-SB-4.0-5.0DUP (SL-021-SA8N-SB-4.0-5.0 SL -021-SA8N-SB-9.0-10.0 SL -067-SA8N-SB-4.0-5.0 SL -080-SA8N-SB-4.0-5.0)	Zirconium	33	20.00	No Qual, OK by difference

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE143 Laboratory: LL

EDD Filename: DE143_v1 eQAPP Name: CDM_SSFL_110509

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11290AQ320851A (SL-021-SA8N-SB-4.0-5.0 SL -021-SA8N-SB-9.0-10.0 SL -067-SA8N-SB-4.0-5.0 SL -080-SA8N-SB-4.0-5.0)	EFH (C21-C30)	114	-	66.00-113.00	-	EFH (C21-C30)	J (all detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P12926AQ221126A (SL-021-SA8N-SB-4.0-5.0 SL -021-SA8N-SB-9.0-10.0 SL -067-SA8N-SB-4.0-5.0 SL -080-SA8N-SB-4.0-5.0)	ANTIMONY	64	-	80.00-120.00	-	ANTIMONY	No Qual, SRM within limits

Method: 8260B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCSB48Q211301A (SL-021-SA8N-SB-4.0-5.0 SL -021-SA8N-SB-9.0-10.0 SL -067-SA8N-SB-4.0-5.0 SL -080-SA8N-SB-4.0-5.0)	N-PROPYLBENZENE SEC-BUTYLBENZENE	122 121	- -	77.00-120.00 75.00-120.00	- -	N-PROPYLBENZENE SEC-BUTYLBENZENE	J(all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE143 **Laboratory: LL**

EDD Filename: DE143_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1625C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-021-SA8N-SB-4.0-5.0	N-NITROSODIMETHYLAMINE	J	34.1	38.5	PQL	ng/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-021-SA8N-SB-4.0-5.0	TIN	J	2.60	11.7	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.05	5.85	PQL	mg/Kg	
SL-021-SA8N-SB-9.0-10.0	TIN	J	2.67	11.8	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.39	5.88	PQL	mg/Kg	
SL-067-SA8N-SB-4.0-5.0	TIN	J	2.79	12.1	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.21	6.04	PQL	mg/Kg	
SL-080-SA8N-SB-4.0-5.0	TIN	J	2.41	11.1	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.28	5.57	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-021-SA8N-SB-4.0-5.0	ANTIMONY	J	0.0765	0.229	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.159	0.459	PQL	mg/Kg	
	SILVER	J	0.0358	0.115	PQL	mg/Kg	
SL-021-SA8N-SB-9.0-10.0	ANTIMONY	J	0.149	0.235	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.117	0.470	PQL	mg/Kg	
	SILVER	J	0.0810	0.118	PQL	mg/Kg	
SL-067-SA8N-SB-4.0-5.0	ANTIMONY	J	0.145	0.230	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.183	0.460	PQL	mg/Kg	
	SILVER	J	0.0517	0.115	PQL	mg/Kg	
SL-080-SA8N-SB-4.0-5.0	ANTIMONY	J	0.170	0.227	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.167	0.455	PQL	mg/Kg	
	SILVER	J	0.0473	0.114	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-067-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.41	1.2	PQL	mg/Kg	J (all detects)
SL-080-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.40	1.1	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE143 **Laboratory: LL**

EDD Filename: DE143_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-021-SA8N-SB-4.0-5.0	EFH (C15-C20)	J	0.58	1.4	PQL	mg/Kg	J (all detects)
SL-021-SA8N-SB-9.0-10.0	EFH (C15-C20)	J	0.49	1.4	PQL	mg/Kg	J (all detects)
SL-067-SA8N-SB-4.0-5.0	EFH (C21-C30)	J	1.3	1.4	PQL	mg/Kg	J (all detects)
SL-080-SA8N-SB-4.0-5.0	EFH (C15-C20)	J	0.65	1.4	PQL	mg/Kg	J (all detects)

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-067-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	25	400	PQL	ug/Kg	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-021-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE Di-n-octylphthalate	J J	9.6 9.2	21 21	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-021-SA8N-SB-9.0-10.0	BIS(2-ETHYLHEXYL)PHTHALATE Butylbenzylphthalate Di-n-octylphthalate	J J J	7.1 19 9.0	21 21 21	PQL PQL PQL	ug/Kg ug/Kg ug/Kg	J (all detects)
SL-067-SA8N-SB-4.0-5.0	BENZO(B)FLUORANTHENE Di-n-octylphthalate	J J	1.0 9.3	2.0 22	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-080-SA8N-SB-4.0-5.0	BENZO(B)FLUORANTHENE BIS(2-ETHYLHEXYL)PHTHALATE Di-n-octylphthalate	J J J	1.3 6.8 9.2	1.9 20 20	PQL PQL PQL	ug/Kg ug/Kg ug/Kg	J (all detects)

LDC #: 26275H4 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/29/11
SDG #: DE143 ADR Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: W
2nd Reviewer: C

METHOD: Metals (EPA SW 846 Method 6010B/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 5/4/11
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	A	Not found by 2nd/ICB;
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	N	} ICP/MSD from SDG DE144, see attachment.
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N A	SRM
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	SL-021-SA8N-SB-4.0-5.0	11		21		31	
2	SL-021-SA8N-SB-9.0-10.0	12		22		32	
3	SL-080-SA8N-SB-4.0-5.0	13		23		33	
4	SL-037-SA8N-SB-4.0-5.0	14		24		34	
5	#1 MS (ICP)	15		25		35	
6	↓ MSD ↓	16		26		36	
7	Dup	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: DE143
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6277627BKG Matrix Spike Lab Sample ID: 6277627MS Matrix Spike Duplicate Lab Sample ID: 6277627MSD
% Solids for Sample: 85.5
Batch Id(s): P12908A

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	Control Limit RPD	M
Aluminum		27836.4199		32591.4261		32975.9142		231.6021	222.7792	MG/KG	2053		2307		1		75	20	P
Boron		8.9743		217.7917		208.0123		231.6021	222.7792	MG/KG	90		89		5		84 - 115	20	P
Calcium		6714.9053		7224.1851		7027.1378		463.2042	445.5583	MG/KG	110		70		3		75	20	P
Iron		31537.5497		36275.8265		31894.3860		115.8011	111.3896	MG/KG	4092		320		13		↓	20	P
Lithium		24.2047		136.8398		132.1604		115.8011	111.3896	MG/KG	97		97		3		82 - 114	20	P
Magnesium		6983.7918		7600.7573		7541.1016		231.6021	222.7792	MG/KG	266		250		1		75	20	P
Manganese		409.8140		478.4193		443.5233		57.9005	55.6948	MG/KG	118		61		8		↓	20	P
Phosphorus		276.2947		378.7297		369.0693		115.8011	111.3896	MG/KG	88		83		3		75 - 125	20	P
Potassium		3855.1216		5189.3695		5359.7371		1158.0105	1113.8958	MG/KG	115		135	N	3		75 - 125	20	P
Sodium		268.5696		1370.1002		1313.8791		1158.0105	1113.8958	MG/KG	95		94		4		75 - 125	20	P
Strontium		30.6269		141.1430		136.1181		115.8011	111.3896	MG/KG	95		95		4		75 - 115	20	P
Tin		2.5977	B	385.9279		368.0991		463.2042	445.5583	MG/KG	83		82		5		80 - 110	20	P
Zirconium		2.0550	B	107.3221		103.0610		115.8011	111.3896	MG/KG	91		91		4		75 - 125	20	P

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: DE144
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6278711BKG Matrix Spike Lab Sample ID: 6278711MS Matrix Spike Duplicate Lab Sample ID: 6278711MSD
% Solids for Sample: 87.3
Batch Id(s): P12926A

SL-056-SA8N-SB-4.0-5.0

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	Control Limit RPD	M
Antimony	121	0.4386		0.7436		0.4683		1.3345	1.3217	MG/KG	23	N	2	N	45	*	75 - 125	20	MS
Arsenic	75	10.5868		9.1416		9.8489		2.2242	2.2028	MG/KG	-65		-33		7		No fail 7ck	20	MS
Barium	137	141.6204		169.6193		176.6896		11.1211	11.0142	MG/KG	252		318		4		↓	20	MS
Beryllium	9	1.0682		2.0703		2.0605		0.8897	0.8811	MG/KG	113		113		0		75 - 125	20	MS
Cadmium	111	0.4923		1.8837		1.9440		1.1121	1.1014	MG/KG	125		132	N	3		75 - 125	20	MS
Chromium	52	26.2578		43.4613		44.9379		11.1211	11.0142	MG/KG	155	N	170	N	3		75 - 125	20	MS
Cobalt	59	12.7434		86.9004		92.2328		55.6056	55.0709	MG/KG	133	N	144	N	6		75 - 125	20	MS
Copper	63	17.5104		32.7628		34.9150		11.1211	11.0142	MG/KG	137	N	158	N	6		75 - 125	20	MS
Lead	208	18.4686		14.5353		15.2569		3.3363	3.3043	MG/KG	-118		-97		5		No fail 7ck	20	MS
Molybdenum	98	1.3924		13.7168		14.3096		11.1211	11.0142	MG/KG	111		117		4		75 - 125	20	MS
Nickel	60	23.6585		35.6098		38.3514		11.1211	11.0142	MG/KG	107		133	N	7		75 - 125	20	MS
Selenium	78	0.2879	B	2.8359		2.7866		2.2242	2.2028	MG/KG	115		113		2		75 - 125	20	MS
Silver	107	0.0402	B	14.3863		14.5343		11.1211	11.0142	MG/KG	129	N	132	N	1		75 - 125	20	MS
Thallium	203	0.2965		1.0647		0.9970		0.4448	0.4406	MG/KG	173	N	159	N	7		75 - 125	20	MS
Vanadium	51	70.6450		71.1084		76.7028		11.1211	11.0142	MG/KG	4		55		8		No fail 7ck	20	MS
Zinc	66	67.9135		72.5987		81.9235		11.1211	11.0142	MG/KG	42		127		12		↓	20	MS

Sb: post spk 119%

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: DE143
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6277627BKG
% Solids for Duplicate: 85.5
Batch ID(s): P12908A
Concentration Units: MG/KG

Duplicate Lab Sample ID: 6277627DUP
% Solids for Sample: 85.5

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			27836.4199		26717.1076		4		P
Boron		5.8	8.9743		8.3006		8		P
Calcium			6714.9053		6504.2175		3		P
Iron			31537.5497		32314.6842		2		P
Lithium			24.2047		23.4538		3		P
Magnesium			6983.7918		6840.9450		2		P
Manganese			409.8140		416.1918		2		P
Phosphorus			276.2947		258.1626		7		P
Potassium			3855.1216		3659.3673		5		P
Sodium		117.0	268.5696		272.9392		2		P
Strontium			30.6269		29.5544		4		P
Tin			2.5977	B	2.7123	B	4		P
Zirconium			2.0550	B	2.8608	B	33		P

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

DE143 3694

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	FLAGS:
AF = Cold Vapor Atomic Fluorescence	* = Duplicate Out of Spec

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: DE144
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6278711BKG
% Solids for Duplicate: 87.3
Batch ID(s): P12926A
Concentration Units: MG/KG

Duplicate Lab Sample ID: 6278711DUP
% Solids for Sample: 87.3

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Antimony	121	0.2	0.4386		0.1121	B	119	*	MS
Arsenic	75		10.5868		4.4907		81	*	MS
Barium	137		141.6204		110.6329		25	*	MS
Beryllium	9		1.0682		0.6646		47	*	MS
Cadmium	111	0.1	0.4923		0.2674		59	*	MS
Chromium	52		26.2578		20.6831		24	*	MS
Cobalt	59		12.7434		8.8035		37	*	MS
Copper	63		17.5104		12.8783		30	*	MS
Lead	208		18.4686		6.8929		91	*	MS
Molybdenum	98	0.1	1.3924		0.5432		88	*	MS
Nickel	60		23.6585		14.9690		45	*	MS
Selenium	78		0.2879	B	0.2278	B	23		MS
Silver	107		0.0402	B	0.0284	B	34		MS
Thallium	203	0.1	0.2965		0.2747		8		MS
Vanadium	51		70.6450		38.5013		59	*	MS
Zinc	66		67.9135		46.8422		37	*	MS

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

DE144 3144

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	FLAGS:
AF = Cold Vapor Atomic Fluorescence	* = Duplicate Out of Spec

SAMPLE DELIVERY GROUP

DE144

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
05-May-2011	TB-050511	6278716	TB	5030B	8015M	III
05-May-2011	TB-050511	6278716	TB	5030B	8260B	III
05-May-2011	TB-050511	6278716	TB	5030B	8260B SIM	III
05-May-2011	SL-057-SA8N-SB-4.0-5.0	6278713	N	3050B	6010B	III
05-May-2011	SL-057-SA8N-SB-4.0-5.0	6278713	N	3050B	6020	III
05-May-2011	SL-057-SA8N-SB-4.0-5.0	6278713	N	3060A	7199	III
05-May-2011	SL-057-SA8N-SB-4.0-5.0	6278713	N	3546	1625C	III
05-May-2011	SL-057-SA8N-SB-4.0-5.0	6278713	N	3550B	8015B	III
05-May-2011	SL-057-SA8N-SB-4.0-5.0	6278713	N	3550B	8015M	III
05-May-2011	SL-057-SA8N-SB-4.0-5.0	6278713	N	3550B	8082	III
05-May-2011	SL-057-SA8N-SB-4.0-5.0	6278713	N	3550B	8270C	III
05-May-2011	SL-057-SA8N-SB-4.0-5.0	6278713	N	3550B	8270C SIM	III
05-May-2011	SL-057-SA8N-SB-4.0-5.0	6278713	N	5035	8015M	III
05-May-2011	SL-057-SA8N-SB-4.0-5.0	6278713	N	5035	8260B	III
05-May-2011	SL-057-SA8N-SB-4.0-5.0	6278713	N	5035	8260B SIM	III
05-May-2011	SL-057-SA8N-SB-4.0-5.0	6278713	N	8330	8330A	III
05-May-2011	SL-057-SA8N-SB-4.0-5.0	6278713	N	METHOD	300.0	III
05-May-2011	SL-057-SA8N-SB-4.0-5.0	6278713	N	METHOD	314.0	III
05-May-2011	SL-057-SA8N-SB-4.0-5.0	6278713	N	METHOD	7471A	III
05-May-2011	SL-057-SA8N-SB-4.0-5.0	6278713	N	METHOD	8015B	III
05-May-2011	SL-057-SA8N-SB-4.0-5.0	6278713	N	METHOD	8015M	III
05-May-2011	SL-057-SA8N-SB-4.0-5.0	6278713	N	METHOD	8315A	III
05-May-2011	SL-057-SA8N-SB-4.0-5.0	6278713	N	METHOD	9012B	III
05-May-2011	SL-057-SA8N-SB-7.0-8.0	6278714	N	3050B	6010B	III
05-May-2011	SL-057-SA8N-SB-7.0-8.0	6278714	N	3050B	6020	III
05-May-2011	SL-057-SA8N-SB-7.0-8.0	6278714	N	3060A	7199	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
05-May-2011	SL-057-SA8N-SB-7.0-8.0	6278714	N	3546	1625C	III
05-May-2011	SL-057-SA8N-SB-7.0-8.0	6278714	N	3550B	8015B	III
05-May-2011	SL-057-SA8N-SB-7.0-8.0	6278714	N	3550B	8015M	III
05-May-2011	SL-057-SA8N-SB-7.0-8.0	6278714	N	3550B	8082	III
05-May-2011	SL-057-SA8N-SB-7.0-8.0	6278714	N	3550B	8270C	III
05-May-2011	SL-057-SA8N-SB-7.0-8.0	6278714	N	3550B	8270C SIM	III
05-May-2011	SL-057-SA8N-SB-7.0-8.0	6278714	N	5035	8015M	III
05-May-2011	SL-057-SA8N-SB-7.0-8.0	6278714	N	5035	8260B	III
05-May-2011	SL-057-SA8N-SB-7.0-8.0	6278714	N	5035	8260B SIM	III
05-May-2011	SL-057-SA8N-SB-7.0-8.0	6278714	N	8330	8330A	III
05-May-2011	SL-057-SA8N-SB-7.0-8.0	6278714	N	METHOD	300.0	III
05-May-2011	SL-057-SA8N-SB-7.0-8.0	6278714	N	METHOD	314.0	III
05-May-2011	SL-057-SA8N-SB-7.0-8.0	6278714	N	METHOD	6850	III
05-May-2011	SL-057-SA8N-SB-7.0-8.0	6278714	N	METHOD	7471A	III
05-May-2011	SL-057-SA8N-SB-7.0-8.0	6278714	N	METHOD	8015B	III
05-May-2011	SL-057-SA8N-SB-7.0-8.0	6278714	N	METHOD	8015M	III
05-May-2011	SL-057-SA8N-SB-7.0-8.0	6278714	N	METHOD	8315A	III
05-May-2011	SL-057-SA8N-SB-7.0-8.0	6278714	N	METHOD	9012B	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0	6278711	N	3050B	6010B	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0	6278711	N	3050B	6020	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0	6278711	N	3060A	7199	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0	6278711	N	3546	1625C	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0	6278711	N	3550B	8015B	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0	6278711	N	3550B	8015M	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0	6278711	N	3550B	8082	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0	6278711	N	3550B	8270C	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
05-May-2011	SL-056-SA8N-SB-4.0-5.0	6278711	N	3550B	8270C SIM	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0	6278711	N	5035	8015M	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0	6278711	N	5035	8260B	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0	6278711	N	5035	8260B SIM	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0	6278711	N	8330	8330A	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0	6278711	N	METHOD	300.0	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0	6278711	N	METHOD	314.0	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0	6278711	N	METHOD	6850	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0	6278711	N	METHOD	7471A	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0	6278711	N	METHOD	8015B	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0	6278711	N	METHOD	8015M	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0	6278711	N	METHOD	8315A	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0	6278711	N	METHOD	9012B	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0DUP	P278711D220818A	DUP	3050B	6020	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0DUP	P278711D221135B	DUP	3050B	6020	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0DUP	P278711D221135C	DUP	3050B	6020	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0DUP	P278711D221135D	DUP	3050B	6020	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0DUP	P278711D272245A	DUP	METHOD	300.0	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0MSD	P278711M220839A	MSD	3050B	6020	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0MSD	P278711M221142B	MSD	3050B	6020	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0MSD	P278711M221142C	MSD	3050B	6020	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0MSD	P278711M221142D	MSD	3050B	6020	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0MSD	P278711M260051	MSD	3550B	8270C	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0MSD	P278711M261129	MSD	3550B	8270C SIM	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0MSD	P278711M261837	MSD	3546	1625C	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0MS	P278711R221139A	MS	3050B	6020	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
05-May-2011	SL-056-SA8N-SB-4.0-5.0MS	P278711R221139B	MS	3050B	6020	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0MS	P278711R221139C	MS	3050B	6020	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0MS	P278711R221139D	MS	3050B	6020	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0MS	P278711R260026	MS	3550B	8270C	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0MS	P278711R261056	MS	3550B	8270C SIM	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0MS	P278711R261820	MS	3546	1625C	III
05-May-2011	SL-056-SA8N-SB-4.0-5.0MS	P278711R272301A	MS	METHOD	300.0	III
05-May-2011	SL-056-SA8N-SB-7.0-8.0	6278712	N	3050B	6010B	III
05-May-2011	SL-056-SA8N-SB-7.0-8.0	6278712	N	3050B	6020	III
05-May-2011	SL-056-SA8N-SB-7.0-8.0	6278712	N	3060A	7199	III
05-May-2011	SL-056-SA8N-SB-7.0-8.0	6278712	N	3546	1625C	III
05-May-2011	SL-056-SA8N-SB-7.0-8.0	6278712	N	3550B	8015B	III
05-May-2011	SL-056-SA8N-SB-7.0-8.0	6278712	N	3550B	8015M	III
05-May-2011	SL-056-SA8N-SB-7.0-8.0	6278712	N	3550B	8082	III
05-May-2011	SL-056-SA8N-SB-7.0-8.0	6278712	N	3550B	8270C	III
05-May-2011	SL-056-SA8N-SB-7.0-8.0	6278712	N	3550B	8270C SIM	III
05-May-2011	SL-056-SA8N-SB-7.0-8.0	6278712	N	5035	8015M	III
05-May-2011	SL-056-SA8N-SB-7.0-8.0	6278712	N	5035	8260B	III
05-May-2011	SL-056-SA8N-SB-7.0-8.0	6278712	N	5035	8260B SIM	III
05-May-2011	SL-056-SA8N-SB-7.0-8.0	6278712	N	8330	8330A	III
05-May-2011	SL-056-SA8N-SB-7.0-8.0	6278712	N	METHOD	300.0	III
05-May-2011	SL-056-SA8N-SB-7.0-8.0	6278712	N	METHOD	314.0	III
05-May-2011	SL-056-SA8N-SB-7.0-8.0	6278712	N	METHOD	7471A	III
05-May-2011	SL-056-SA8N-SB-7.0-8.0	6278712	N	METHOD	8015B	III
05-May-2011	SL-056-SA8N-SB-7.0-8.0	6278712	N	METHOD	8015M	III
05-May-2011	SL-056-SA8N-SB-7.0-8.0	6278712	N	METHOD	8315A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
05-May-2011	SL-056-SA8N-SB-7.0-8.0	6278712	N	METHOD	9012B	III
05-May-2011	SL-062-SA8N-SB-4.0-5.0	6278715	N	3050B	6010B	III
05-May-2011	SL-062-SA8N-SB-4.0-5.0	6278715	N	3050B	6020	III
05-May-2011	SL-062-SA8N-SB-4.0-5.0	6278715	N	3060A	7199	III
05-May-2011	SL-062-SA8N-SB-4.0-5.0	6278715	N	3546	1625C	III
05-May-2011	SL-062-SA8N-SB-4.0-5.0	6278715	N	3550B	8015B	III
05-May-2011	SL-062-SA8N-SB-4.0-5.0	6278715	N	3550B	8015M	III
05-May-2011	SL-062-SA8N-SB-4.0-5.0	6278715	N	3550B	8082	III
05-May-2011	SL-062-SA8N-SB-4.0-5.0	6278715	N	3550B	8270C	III
05-May-2011	SL-062-SA8N-SB-4.0-5.0	6278715	N	3550B	8270C SIM	III
05-May-2011	SL-062-SA8N-SB-4.0-5.0	6278715	N	5035	8015M	III
05-May-2011	SL-062-SA8N-SB-4.0-5.0	6278715	N	5035	8260B	III
05-May-2011	SL-062-SA8N-SB-4.0-5.0	6278715	N	5035	8260B SIM	III
05-May-2011	SL-062-SA8N-SB-4.0-5.0	6278715	N	8330	8330A	III
05-May-2011	SL-062-SA8N-SB-4.0-5.0	6278715	N	METHOD	300.0	III
05-May-2011	SL-062-SA8N-SB-4.0-5.0	6278715	N	METHOD	314.0	III
05-May-2011	SL-062-SA8N-SB-4.0-5.0	6278715	N	METHOD	7471A	III
05-May-2011	SL-062-SA8N-SB-4.0-5.0	6278715	N	METHOD	8015B	III
05-May-2011	SL-062-SA8N-SB-4.0-5.0	6278715	N	METHOD	8015M	III
05-May-2011	SL-062-SA8N-SB-4.0-5.0	6278715	N	METHOD	8315A	III
05-May-2011	SL-062-SA8N-SB-4.0-5.0	6278715	N	METHOD	9012B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE144 **Laboratory:** LL

EDD Filename: DE144_v1. **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-056-SA8N-SB-4.0-5.0 *Collected:* 5/5/2011 9:35:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.5		0.92	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-056-SA8N-SB-7.0-8.0 *Collected:* 5/5/2011 9:45:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.1		0.86	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-057-SA8N-SB-4.0-5.0 *Collected:* 5/5/2011 8:50:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.3		0.93	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-057-SA8N-SB-7.0-8.0 *Collected:* 5/5/2011 9:00:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.7		0.88	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-062-SA8N-SB-4.0-5.0 *Collected:* 5/5/2011 11:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.7		0.93	MDL	1.2	PQL	mg/Kg	J	Q

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-056-SA8N-SB-4.0-5.0 *Collected:* 5/5/2011 9:35:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	401		0.0893	MDL	0.573	PQL	mg/Kg	J	E
POTASSIUM	3510		20.6	MDL	57.3	PQL	mg/Kg	J	E
TIN	2.31	J	1.15	MDL	11.5	PQL	mg/Kg	U	B
Zirconium	2.00	J	0.962	MDL	5.73	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE144 **Laboratory: LL**

EDD Filename: DE144_v1. **eQAPP Name: CDM_SSFL_110509**

Method Category: **METALS**

Method: **6010B** ***Matrix:*** **SO**

Sample ID: SL-056-SA8N-SB-7.0-8.0 ***Collected:*** 5/5/2011 9:45:00 AM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.34	J	0.938	MDL	5.27	PQL	mg/Kg	J	Z
MANGANESE	267		0.0822	MDL	0.527	PQL	mg/Kg	J	E
POTASSIUM	1600		19.0	MDL	52.7	PQL	mg/Kg	J	E
TIN	2.64	J	1.05	MDL	10.5	PQL	mg/Kg	U	B
Zirconium	1.82	J	0.886	MDL	5.27	PQL	mg/Kg	J	Z

Sample ID: SL-057-SA8N-SB-4.0-5.0 ***Collected:*** 5/5/2011 8:50:00 AM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	320		0.0868	MDL	0.556	PQL	mg/Kg	J	E
POTASSIUM	5480		20.0	MDL	55.6	PQL	mg/Kg	J	E
TIN	2.20	J	1.11	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	1.35	J	0.935	MDL	5.56	PQL	mg/Kg	J	Z

Sample ID: SL-057-SA8N-SB-7.0-8.0 ***Collected:*** 5/5/2011 9:00:00 AM ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	311		0.0858	MDL	0.550	PQL	mg/Kg	J	E
POTASSIUM	4090		19.8	MDL	55.0	PQL	mg/Kg	J	E
TIN	2.01	J	1.10	MDL	11.0	PQL	mg/Kg	U	B
Zirconium	1.77	J	0.924	MDL	5.50	PQL	mg/Kg	J	Z

Sample ID: SL-062-SA8N-SB-4.0-5.0 ***Collected:*** 5/5/2011 11:55:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	319		0.0860	MDL	0.551	PQL	mg/Kg	J	E
POTASSIUM	4200		19.8	MDL	55.1	PQL	mg/Kg	J	E
TIN	2.06	J	1.10	MDL	11.0	PQL	mg/Kg	U	B
Zirconium	1.75	J	0.926	MDL	5.51	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE144 **Laboratory: LL**

EDD Filename: DE144_v1. **eQAPP Name: CDM_SSFL_110509**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: SL-056-SA8N-SB-4.0-5.0 ***Collected:*** 5/5/2011 9:35:00 AM ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.439		0.0661	MDL	0.220	PQL	mg/Kg	J	E, Q
THALLIUM	0.297		0.0330	MDL	0.110	PQL	mg/Kg	J	Q

Sample ID: SL-056-SA8N-SB-4.0-5.0 ***Collected:*** 5/5/2011 9:35:00 AM ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.288	J	0.0441	MDL	0.441	PQL	mg/Kg	J	Z

Sample ID: SL-056-SA8N-SB-4.0-5.0 ***Collected:*** 5/5/2011 9:35:00 AM ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	1.39		0.0551	MDL	0.110	PQL	mg/Kg	J	E

Sample ID: SL-056-SA8N-SB-4.0-5.0 ***Collected:*** 5/5/2011 9:35:00 AM ***Analysis Type:*** REA4 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	142		0.119	MDL	0.441	PQL	mg/Kg	J	E

Sample ID: SL-056-SA8N-SB-4.0-5.0 ***Collected:*** 5/5/2011 9:35:00 AM ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	10.6		0.0881	MDL	0.441	PQL	mg/Kg	J	E
BERYLLIUM	1.07		0.0176	MDL	0.110	PQL	mg/Kg	J	E
CADMIUM	0.492		0.0441	MDL	0.110	PQL	mg/Kg	J	Q
CHROMIUM	26.3		0.132	MDL	0.441	PQL	mg/Kg	J	Q, E
COBALT	12.7		0.0220	MDL	0.110	PQL	mg/Kg	J	Q, E
COPPER	17.5		0.0727	MDL	0.441	PQL	mg/Kg	J	Q, E
LEAD	18.5		0.0115	MDL	0.220	PQL	mg/Kg	J	E
NICKEL	23.7		0.110	MDL	0.441	PQL	mg/Kg	J	Q, E
SILVER	0.0402	J	0.0132	MDL	0.110	PQL	mg/Kg	J	Z, Q
VANADIUM	70.6		0.0242	MDL	0.110	PQL	mg/Kg	J	E
ZINC	67.9		0.617	MDL	3.30	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE144 **Laboratory:** LL

EDD Filename: DE144_v1. **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-056-SA8N-SB-7.0-8.0 *Collected:* 5/5/2011 9:45:00 AM *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0679	J	0.0422	MDL	0.422	PQL	mg/Kg	J	Z

Sample ID: SL-056-SA8N-SB-7.0-8.0 *Collected:* 5/5/2011 9:45:00 AM *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.294		0.0527	MDL	0.105	PQL	mg/Kg	J	E

Sample ID: SL-056-SA8N-SB-7.0-8.0 *Collected:* 5/5/2011 9:45:00 AM *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	95.7		0.114	MDL	0.422	PQL	mg/Kg	J	E

Sample ID: SL-056-SA8N-SB-7.0-8.0 *Collected:* 5/5/2011 9:45:00 AM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0633	U	0.0633	MDL	0.211	PQL	mg/Kg	UJ	E, Q
ARSENIC	5.39		0.0843	MDL	0.422	PQL	mg/Kg	J	E
BERYLLIUM	0.511		0.0169	MDL	0.105	PQL	mg/Kg	J	E
CADMIUM	0.0512	J	0.0422	MDL	0.105	PQL	mg/Kg	J	Z, Q
CHROMIUM	18.7		0.127	MDL	0.422	PQL	mg/Kg	J	Q, E
COBALT	6.42		0.0211	MDL	0.105	PQL	mg/Kg	J	Q, E
LEAD	3.95		0.0110	MDL	0.211	PQL	mg/Kg	J	E
NICKEL	16.4		0.105	MDL	0.422	PQL	mg/Kg	J	Q, E
SILVER	0.0137	J	0.0127	MDL	0.105	PQL	mg/Kg	J	Z, Q
THALLIUM	0.370		0.0316	MDL	0.105	PQL	mg/Kg	J	Q
VANADIUM	40.3		0.0232	MDL	0.105	PQL	mg/Kg	J	E
ZINC	64.2		0.590	MDL	3.16	PQL	mg/Kg	J	E

Sample ID: SL-057-SA8N-SB-4.0-5.0 *Collected:* 5/5/2011 8:50:00 AM *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.284		0.0449	MDL	0.112	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE144 **Laboratory: LL**

EDD Filename: DE144_v1. **eQAPP Name: CDM_SSFL_110509**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: **SL-057-SA8N-SB-4.0-5.0** ***Collected:*** **5/5/2011 8:50:00 AM** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.292	J	0.0449	MDL	0.449	PQL	mg/Kg	J	Z

Sample ID: **SL-057-SA8N-SB-4.0-5.0** ***Collected:*** **5/5/2011 8:50:00 AM** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.399		0.0562	MDL	0.112	PQL	mg/Kg	J	E

Sample ID: **SL-057-SA8N-SB-4.0-5.0** ***Collected:*** **5/5/2011 8:50:00 AM** ***Analysis Type:*** **REA4** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	128		0.121	MDL	0.449	PQL	mg/Kg	J	E

Sample ID: **SL-057-SA8N-SB-4.0-5.0** ***Collected:*** **5/5/2011 8:50:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0992	J	0.0674	MDL	0.225	PQL	mg/Kg	J	Z, E, Q
ARSENIC	6.43		0.0899	MDL	0.449	PQL	mg/Kg	J	E
BERYLLIUM	0.806		0.0180	MDL	0.112	PQL	mg/Kg	J	E
CHROMIUM	34.1		0.135	MDL	0.449	PQL	mg/Kg	J	Q, E
COBALT	12.0		0.0225	MDL	0.112	PQL	mg/Kg	J	Q, E
COPPER	18.8		0.0742	MDL	0.449	PQL	mg/Kg	J	Q, E
LEAD	10.4		0.0117	MDL	0.225	PQL	mg/Kg	J	E
NICKEL	23.4		0.112	MDL	0.449	PQL	mg/Kg	J	Q, E
SILVER	0.0267	J	0.0135	MDL	0.112	PQL	mg/Kg	J	Z, Q
THALLIUM	0.397		0.0337	MDL	0.112	PQL	mg/Kg	J	Q
VANADIUM	68.8		0.0247	MDL	0.112	PQL	mg/Kg	J	E
ZINC	74.2		0.629	MDL	3.37	PQL	mg/Kg	J	E

Sample ID: **SL-057-SA8N-SB-7.0-8.0** ***Collected:*** **5/5/2011 9:00:00 AM** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.277	J	0.0431	MDL	0.431	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE144 **Laboratory: LL**

EDD Filename: DE144_v1. **eQAPP Name: CDM_SSFL_110509**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: **SL-057-SA8N-SB-7.0-8.0** ***Collected:*** **5/5/2011 9:00:00 AM** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.258		0.0539	MDL	0.108	PQL	mg/Kg	J	E

Sample ID: **SL-057-SA8N-SB-7.0-8.0** ***Collected:*** **5/5/2011 9:00:00 AM** ***Analysis Type:*** **REA4** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	112		0.116	MDL	0.431	PQL	mg/Kg	J	E

Sample ID: **SL-057-SA8N-SB-7.0-8.0** ***Collected:*** **5/5/2011 9:00:00 AM** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.116	J	0.0647	MDL	0.216	PQL	mg/Kg	J	Z, E, Q
ARSENIC	6.17		0.0863	MDL	0.431	PQL	mg/Kg	J	E
BERYLLIUM	0.748		0.0173	MDL	0.108	PQL	mg/Kg	J	E
CADMIUM	0.487		0.0431	MDL	0.108	PQL	mg/Kg	J	Q
CHROMIUM	28.6		0.129	MDL	0.431	PQL	mg/Kg	J	Q, E
COBALT	11.1		0.0216	MDL	0.108	PQL	mg/Kg	J	Q, E
COPPER	18.1		0.0712	MDL	0.431	PQL	mg/Kg	J	Q, E
LEAD	9.47		0.0112	MDL	0.216	PQL	mg/Kg	J	E
NICKEL	22.4		0.108	MDL	0.431	PQL	mg/Kg	J	Q, E
SILVER	0.0247	J	0.0129	MDL	0.108	PQL	mg/Kg	J	Z, Q
THALLIUM	0.338		0.0324	MDL	0.108	PQL	mg/Kg	J	Q
VANADIUM	61.3		0.0237	MDL	0.108	PQL	mg/Kg	J	E
ZINC	68.2		0.604	MDL	3.24	PQL	mg/Kg	J	E

Sample ID: **SL-062-SA8N-SB-4.0-5.0** ***Collected:*** **5/5/2011 11:55:00** ***Analysis Type:*** **REA2** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.325	J	0.0441	MDL	0.441	PQL	mg/Kg	J	Z

Sample ID: **SL-062-SA8N-SB-4.0-5.0** ***Collected:*** **5/5/2011 11:55:00** ***Analysis Type:*** **REA3** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.244		0.0551	MDL	0.110	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE144 **Laboratory: LL**

EDD Filename: DE144_v1. **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-062-SA8N-SB-4.0-5.0 *Collected:* 5/5/2011 11:55:00 *Analysis Type:* REA4 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	131		0.119	MDL	0.441	PQL	mg/Kg	J	E

Sample ID: SL-062-SA8N-SB-4.0-5.0 *Collected:* 5/5/2011 11:55:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0661	U	0.0661	MDL	0.220	PQL	mg/Kg	UJ	E, Q
ARSENIC	7.39		0.0882	MDL	0.441	PQL	mg/Kg	J	E
BERYLLIUM	0.872		0.0176	MDL	0.110	PQL	mg/Kg	J	E
CADMIUM	0.460		0.0441	MDL	0.110	PQL	mg/Kg	J	Q
CHROMIUM	36.8		0.132	MDL	0.441	PQL	mg/Kg	J	Q, E
COBALT	13.6		0.0220	MDL	0.110	PQL	mg/Kg	J	Q, E
COPPER	22.1		0.0728	MDL	0.441	PQL	mg/Kg	J	Q, E
LEAD	11.5		0.0115	MDL	0.220	PQL	mg/Kg	J	E
NICKEL	26.6		0.110	MDL	0.441	PQL	mg/Kg	J	Q, E
THALLIUM	0.370		0.0331	MDL	0.110	PQL	mg/Kg	J	Q
VANADIUM	75.8		0.0243	MDL	0.110	PQL	mg/Kg	J	E
ZINC	85.4		0.617	MDL	3.31	PQL	mg/Kg	J	E

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: SL-057-SA8N-SB-7.0-8.0 *Collected:* 5/5/2011 9:00:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.35	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: SL-057-SA8N-SB-4.0-5.0 *Collected:* 5/5/2011 8:50:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0310	J	0.0032	MDL	0.112	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE144 **Laboratory: LL**

EDD Filename: DE144_v1. **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 1625C **Matrix: SO**

Sample ID: SL-056-SA8N-SB-4.0-5.0 *Collected:* 5/5/2011 9:35:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	18.8	U	18.8	MDL	37.7	PQL	ng/Kg	UJ	Q

Sample ID: SL-057-SA8N-SB-4.0-5.0 *Collected:* 5/5/2011 8:50:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	25.2	J	19.2	MDL	38.5	PQL	ng/Kg	J	Z, S

Sample ID: SL-057-SA8N-SB-7.0-8.0 *Collected:* 5/5/2011 9:00:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	24.5	J	18.2	MDL	36.4	PQL	ng/Kg	J	Z

Sample ID: SL-062-SA8N-SB-4.0-5.0 *Collected:* 5/5/2011 11:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	19.7	J	19.3	MDL	38.6	PQL	ng/Kg	J	Z

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-056-SA8N-SB-4.0-5.0 *Collected:* 5/5/2011 9:35:00 AM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	0.79	J	0.46	MDL	1.4	PQL	mg/Kg	J	Z

Sample ID: SL-056-SA8N-SB-7.0-8.0 *Collected:* 5/5/2011 9:45:00 AM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.82	J	0.43	MDL	1.3	PQL	mg/Kg	J	Z

Sample ID: SL-057-SA8N-SB-4.0-5.0 *Collected:* 5/5/2011 8:50:00 AM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	1.0	J	0.46	MDL	1.4	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE144 **Laboratory: LL**

EDD Filename: DE144_v1. **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-062-SA8N-SB-4.0-5.0 *Collected:* 5/5/2011 11:55:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	1.0	J	0.46	MDL	1.4	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: SL-057-SA8N-SB-4.0-5.0 *Collected:* 5/5/2011 8:50:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	0.93	J	0.38	MDL	2.0	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-056-SA8N-SB-4.0-5.0 *Collected:* 5/5/2011 9:35:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZIDINE	1300	U	1300	MDL	3800	PQL	ug/Kg	UJ	Q
BIS(2-ETHYLHEXYL)PHTHALATE	32	J	19	MDL	380	PQL	ug/Kg	U	B

Sample ID: SL-056-SA8N-SB-7.0-8.0 *Collected:* 5/5/2011 9:45:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	31	J	18	MDL	360	PQL	ug/Kg	U	B

Sample ID: SL-057-SA8N-SB-4.0-5.0 *Collected:* 5/5/2011 8:50:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	25	J	19	MDL	380	PQL	ug/Kg	U	B

Sample ID: SL-057-SA8N-SB-7.0-8.0 *Collected:* 5/5/2011 9:00:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	23	J	18	MDL	360	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE144 **Laboratory: LL**

EDD Filename: DE144_v1. **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-056-SA8N-SB-4.0-5.0 *Collected:* 5/5/2011 9:35:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.95	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-057-SA8N-SB-4.0-5.0 *Collected:* 5/5/2011 8:50:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.90	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
NAPHTHALENE	0.90	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-057-SA8N-SB-7.0-8.0 *Collected:* 5/5/2011 9:00:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	1.0	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
2-METHYLNAPHTHALENE	0.96	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-062-SA8N-SB-4.0-5.0 *Collected:* 5/5/2011 11:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.88	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z

Method Category: VOA

Method: 8260B **Matrix: SO**

Sample ID: SL-056-SA8N-SB-7.0-8.0 *Collected:* 5/5/2011 9:45:00 AM *Analysis Type:* RES *Dilution:* 0.98

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOLUENE	0.1	J	0.08	MDL	4.2	PQL	ug/Kg	U	B

Sample ID: SL-057-SA8N-SB-4.0-5.0 *Collected:* 5/5/2011 8:50:00 AM *Analysis Type:* RES *Dilution:* 0.87

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	7.5	J	6.8	MDL	8.1	PQL	ug/Kg	J	Z
TOLUENE	0.1	J	0.08	MDL	4.0	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE144 **Laboratory:** LL

EDD Filename: DE144_v1. **eQAPP Name:** CDM_SSFL_110509

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-057-SA8N-SB-7.0-8.0 **Collected:** 5/5/2011 9:00:00 AM **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.0	J	7.3	MDL	8.8	PQL	ug/Kg	J	Z
TOLUENE	0.17	J	0.09	MDL	4.4	PQL	ug/Kg	U	B

Sample ID: SL-062-SA8N-SB-4.0-5.0 **Collected:** 5/5/2011 11:55:00 **Analysis Type:** RES **Dilution:** 0.91

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOLUENE	0.08	J	0.08	MDL	4.2	PQL	ug/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE144 **Laboratory: LL**

EDD Filename: DE144_v1. **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
	Sampling to Leaching Estimation
	Sampling to Leaching Rejection
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Continuing Calibration Verification Percent Recovery Lower Estimation
C	Continuing Calibration Verification Percent Recovery Lower Rejection
C	Continuing Calibration Verification Percent Recovery Upper Estimation
C	Continuing Calibration Verification Percent Recovery Upper Rejection
C	Continuing Calibration Verification Relative Response Factor
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Relative Response Factor
C	Initial Calibration Verification Correlation Coefficient

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE144 **Laboratory: LL**

EDD Filename: DE144_v1. **eQAPP Name: CDM_SSFL_110509**

C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Lower Estimation
C	Initial Calibration Verification Percent Recovery Lower Rejection
C	Initial Calibration Verification Percent Recovery Upper Estimation
C	Initial Calibration Verification Percent Recovery Upper Rejection
C	Initial Calibration Verification Relative Response Factor
E	Laboratory Control Precision
E	Laboratory Duplicate Precision
E	Laboratory Triplicate Precision
E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE144 **Laboratory: LL**

EDD Filename: DE144_v1. **eQAPP Name: CDM_SSFL_110509**

L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Laboratory Triplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
Q	Matrix Spike Upper Rejection
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

DE144

Method Blank Outlier Report

Lab Reporting Batch ID: DE144 **Laboratory: LL**

EDD Filename: DE144_v1. **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P12908AB220953	5/10/2011 9:53:00 AM	ALUMINUM	12.4 mg/Kg	SL-056-SA8N-SB-4.0-5.0
		CALCIUM	17.6 mg/Kg	SL-056-SA8N-SB-7.0-8.0
		MAGNESIUM	3.88 mg/Kg	SL-057-SA8N-SB-4.0-5.0
		PHOSPHORUS	2.28 mg/Kg	SL-057-SA8N-SB-7.0-8.0
		TIN	1.46 mg/Kg	SL-062-SA8N-SB-4.0-5.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-056-SA8N-SB-4.0-5.0(RES)	TIN	2.31 mg/Kg	2.31U mg/Kg
SL-056-SA8N-SB-7.0-8.0(RES)	TIN	2.64 mg/Kg	2.64U mg/Kg
SL-057-SA8N-SB-4.0-5.0(RES)	TIN	2.20 mg/Kg	2.20U mg/Kg
SL-057-SA8N-SB-7.0-8.0(RES)	TIN	2.01 mg/Kg	2.01U mg/Kg
SL-062-SA8N-SB-4.0-5.0(RES)	TIN	2.06 mg/Kg	2.06U mg/Kg

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P12926AB220810A	5/13/2011 8:10:00 AM	COPPER	0.503 mg/Kg	SL-056-SA8N-SB-4.0-5.0 SL-056-SA8N-SB-7.0-8.0 SL-057-SA8N-SB-4.0-5.0 SL-057-SA8N-SB-7.0-8.0 SL-062-SA8N-SB-4.0-5.0
P12926AB221123A	5/11/2011 11:23:00 AM	VANADIUM	0.0744 mg/Kg	SL-056-SA8N-SB-4.0-5.0
		ZINC	0.738 mg/Kg	SL-056-SA8N-SB-7.0-8.0 SL-057-SA8N-SB-4.0-5.0 SL-057-SA8N-SB-7.0-8.0 SL-062-SA8N-SB-4.0-5.0
P13726AB220859A	5/18/2011 8:59:00 AM	COPPER	0.0827 mg/Kg	SL-056-SA8N-SB-7.0-8.0

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB51B210326A	5/11/2011 3:26:00 AM	METHYLENE CHLORIDE	0.92 ug/Kg	SL-056-SA8N-SB-4.0-5.0
		TOLUENE	0.09 ug/Kg	SL-056-SA8N-SB-7.0-8.0 SL-057-SA8N-SB-4.0-5.0 SL-057-SA8N-SB-7.0-8.0 SL-062-SA8N-SB-4.0-5.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-056-SA8N-SB-7.0-8.0(RES)	TOLUENE	0.1 ug/Kg	4.2U ug/Kg

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Method Blank Outlier Report

Lab Reporting Batch ID: DE144 **Laboratory: LL**

EDD Filename: DE144_v1. **eQAPP Name: CDM_SSFL_110509**

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-057-SA8N-SB-4.0-5.0(RES)	TOLUENE	0.1 ug/Kg	4.0U ug/Kg
SL-057-SA8N-SB-7.0-8.0(RES)	TOLUENE	0.17 ug/Kg	4.4U ug/Kg
SL-062-SA8N-SB-4.0-5.0(RES)	TOLUENE	0.08 ug/Kg	4.2U ug/Kg

Method: **8270C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKLA12B262311	5/10/2011 11:11:00 PM	BIS(2-ETHYLHEXYL)PHTHALATE	17 ug/Kg	SL-056-SA8N-SB-4.0-5.0 SL-056-SA8N-SB-7.0-8.0 SL-057-SA8N-SB-4.0-5.0 SL-057-SA8N-SB-7.0-8.0 SL-062-SA8N-SB-4.0-5.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-056-SA8N-SB-4.0-5.0(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	32 ug/Kg	380U ug/Kg
SL-056-SA8N-SB-7.0-8.0(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	31 ug/Kg	360U ug/Kg
SL-057-SA8N-SB-4.0-5.0(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	25 ug/Kg	380U ug/Kg
SL-057-SA8N-SB-7.0-8.0(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	23 ug/Kg	360U ug/Kg

Method: **8270C SIM**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKLB12B260748	5/18/2011 7:48:00 AM	ANTHRACENE CHRYSENE Di-n-octylphthalate PHENANTHRENE	0.72 ug/Kg 0.37 ug/Kg 34 ug/Kg 0.83 ug/Kg	SL-056-SA8N-SB-4.0-5.0 SL-056-SA8N-SB-7.0-8.0 SL-057-SA8N-SB-4.0-5.0 SL-057-SA8N-SB-7.0-8.0 SL-062-SA8N-SB-4.0-5.0

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE144 **Laboratory: LL**

EDD Filename: DE144_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-056-SA8N-SB-4.0-5.0MS SL-056-SA8N-SB-4.0-5.0MSD (SL-056-SA8N-SB-4.0-5.0)	BENZIDINE	29	34	35.00-141.00	-	BENZIDINE	J (all detects) UJ (all non-detects)

Method: 1625C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-056-SA8N-SB-4.0-5.0MS SL-056-SA8N-SB-4.0-5.0MSD (SL-056-SA8N-SB-4.0-5.0)	N-NITROSODIMETHYLAMINE	45	55	70.00-130.00	-	N-NITROSODIMETHYLAMINE	J(all detects) UJ(all non-detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-056-SA8N-SB-4.0-5.0MS	CADMIUM	-	132	75.00-125.00	-	CADMIUM	
SL-056-SA8N-SB-4.0-5.0MSD	CHROMIUM	155	170	75.00-125.00	-	CHROMIUM	J(all detects)
(SL-056-SA8N-SB-4.0-5.0	COBALT	133	144	75.00-125.00	-	COBALT	
SL-056-SA8N-SB-7.0-8.0	COPPER	137	158	75.00-125.00	-	COPPER	
SL-057-SA8N-SB-4.0-5.0	NICKEL	-	133	75.00-125.00	-	NICKEL	
SL-057-SA8N-SB-7.0-8.0	SILVER	129	132	75.00-125.00	-	SILVER	
SL-062-SA8N-SB-4.0-5.0)	THALLIUM	173	159	75.00-125.00	-	THALLIUM	
SL-056-SA8N-SB-4.0-5.0MS	ANTIMONY	23	2	75.00-125.00	45 (20.00)	ANTIMONY	J(all detects)
SL-056-SA8N-SB-4.0-5.0MSD	ARSENIC	-65	-34	75.00-125.00	-	ARSENIC	UJ(all non-detects)
(SL-056-SA8N-SB-4.0-5.0	LEAD	-118	-97	75.00-125.00	-	LEAD	
SL-056-SA8N-SB-7.0-8.0	VANADIUM	4	55	75.00-125.00	-	VANADIUM	Sb Post Spike=119%
SL-057-SA8N-SB-4.0-5.0							
SL-057-SA8N-SB-7.0-8.0							As, Pb, V No Qual, >4x
SL-062-SA8N-SB-4.0-5.0)							
SL-056-SA8N-SB-4.0-5.0MS	ZINC	42	127	75.00-125.00	-	ZINC	
SL-056-SA8N-SB-4.0-5.0MSD							
(SL-056-SA8N-SB-4.0-5.0							
SL-056-SA8N-SB-7.0-8.0							No Qual, >4x
SL-057-SA8N-SB-4.0-5.0							
SL-057-SA8N-SB-7.0-8.0							
SL-062-SA8N-SB-4.0-5.0)							
SL-056-SA8N-SB-4.0-5.0MS	BARIUM	252	318	75.00-125.00	-	BARIUM	
SL-056-SA8N-SB-4.0-5.0MSD							
(SL-056-SA8N-SB-4.0-5.0							
SL-056-SA8N-SB-7.0-8.0							No Qual, >4x
SL-057-SA8N-SB-4.0-5.0							
SL-057-SA8N-SB-7.0-8.0							
SL-062-SA8N-SB-4.0-5.0)							

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE144 **Laboratory: LL**

EDD Filename: DE144_v1. **eQAPP Name: CDM_SSFL_110509**

Method: **300.0**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-056-SA8N-SB-4.0-5.0MS (SL-056-SA8N-SB-4.0-5.0 SL -056-SA8N-SB-7.0-8.0 SL -057-SA8N-SB-4.0-5.0 SL -057-SA8N-SB-7.0-8.0 SL -062-SA8N-SB-4.0-5.0)	FLUORIDE	44	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE144 **Laboratory: LL**

EDD Filename: DE144_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-056-SA8N-SB-4.0-5.0DUP (SL-056-SA8N-SB-4.0-5.0 SL -056-SA8N-SB-7.0-8.0 SL -057-SA8N-SB-4.0-5.0 SL -057-SA8N-SB-7.0-8.0 SL -062-SA8N-SB-4.0-5.0)	FLUORIDE	45	20.00	
	Nitrate-NO3	37	20.00	No Qual OK by difference

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-056-SA8N-SB-4.0-5.0DUP (SL-056-SA8N-SB-4.0-5.0 SL -056-SA8N-SB-7.0-8.0 SL -057-SA8N-SB-4.0-5.0 SL -057-SA8N-SB-7.0-8.0 SL -062-SA8N-SB-4.0-5.0)	ANTIMONY	119	20.00	
	ARSENIC	81	20.00	
	BARIUM	25	20.00	
	BERYLLIUM	47	20.00	
	CADMIUM	59	20.00	
	CHROMIUM	24	20.00	
	COBALT	37	20.00	J(all detects) UJ(all non-detects)
	COPPER	30	20.00	
	LEAD	91	20.00	
	MOLYBDENUM	0.8492	0.22 mg/Kg	Sb, Cd, Se, Ag, Tl No Qual, OK by difference
	NICKEL	45	20.00	
	SELENIUM	23	20.00	
	SILVER	34	20.00	
	VANADIUM	59	20.00	
	ZINC	37	20.00	

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE144 **Laboratory: LL**

EDD Filename: DE144_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P12926AQ221126A (SL-056-SA8N-SB-4.0-5.0 SL -056-SA8N-SB-7.0-8.0 SL -057-SA8N-SB-4.0-5.0 SL -057-SA8N-SB-7.0-8.0 SL -062-SA8N-SB-4.0-5.0)	ANTIMONY	64	-	80.00-120.00	-	ANTIMONY	No Qual, SRM within QC limits

Method: 8260B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCSB51Q210349A LCSB51Y210413A (SL-056-SA8N-SB-4.0-5.0 SL -056-SA8N-SB-7.0-8.0 SL -057-SA8N-SB-4.0-5.0 SL -057-SA8N-SB-7.0-8.0 SL -062-SA8N-SB-4.0-5.0)	BROMOCHLOROMETHANE	128	128	79.00-124.00	-	BROMOCHLOROMETHANE	J(all detects)

Surrogate Outlier Report

Lab Reporting Batch ID: DE144 **Laboratory: LL**

EDD Filename: DE144_v1. **eQAPP Name: CDM_SSFL_110509**

Method: **1625C**
Matrix: **SO**

Sample ID	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-057-SA8N-SB-4.0-5.0	N-Nitrosodimethylamine-d6	151	50.00-150.00	All Target Analytes	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE144 **Laboratory: LL**

EDD Filename: DE144_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 1625C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-057-SA8N-SB-4.0-5.0	N-NITROSODIMETHYLAMINE	J	25.2	38.5	PQL	ng/Kg	J (all detects)
SL-057-SA8N-SB-7.0-8.0	N-NITROSODIMETHYLAMINE	J	24.5	36.4	PQL	ng/Kg	J (all detects)
SL-062-SA8N-SB-4.0-5.0	N-NITROSODIMETHYLAMINE	J	19.7	38.6	PQL	ng/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-056-SA8N-SB-4.0-5.0	TIN	J	2.31	11.5	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.00	5.73	PQL	mg/Kg	
SL-056-SA8N-SB-7.0-8.0	BORON	J	3.34	5.27	PQL	mg/Kg	J (all detects)
	TIN	J	2.64	10.5	PQL	mg/Kg	
	Zirconium	J	1.82	5.27	PQL	mg/Kg	
SL-057-SA8N-SB-4.0-5.0	TIN	J	2.20	11.1	PQL	mg/Kg	J (all detects)
	Zirconium	J	1.35	5.56	PQL	mg/Kg	
SL-057-SA8N-SB-7.0-8.0	TIN	J	2.01	11.0	PQL	mg/Kg	J (all detects)
	Zirconium	J	1.77	5.50	PQL	mg/Kg	
SL-062-SA8N-SB-4.0-5.0	TIN	J	2.06	11.0	PQL	mg/Kg	J (all detects)
	Zirconium	J	1.75	5.51	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-056-SA8N-SB-4.0-5.0	SELENIUM	J	0.288	0.441	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0402	0.110	PQL	mg/Kg	
SL-056-SA8N-SB-7.0-8.0	CADMIUM	J	0.0512	0.105	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0679	0.422	PQL	mg/Kg	
	SILVER	J	0.0137	0.105	PQL	mg/Kg	
SL-057-SA8N-SB-4.0-5.0	ANTIMONY	J	0.0992	0.225	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.292	0.449	PQL	mg/Kg	
	SILVER	J	0.0267	0.112	PQL	mg/Kg	
SL-057-SA8N-SB-7.0-8.0	ANTIMONY	J	0.116	0.216	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.277	0.431	PQL	mg/Kg	
	SILVER	J	0.0247	0.108	PQL	mg/Kg	
SL-062-SA8N-SB-4.0-5.0	SELENIUM	J	0.325	0.441	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE144 **Laboratory: LL**

EDD Filename: DE144_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-057-SA8N-SB-7.0-8.0	HEXAVALENT CHROMIUM	J	0.35	1.1	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-057-SA8N-SB-4.0-5.0	MERCURY	J	0.0310	0.112	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-056-SA8N-SB-4.0-5.0	EFH (C15-C20)	J	0.79	1.4	PQL	mg/Kg	J (all detects)
SL-056-SA8N-SB-7.0-8.0	EFH (C30-C40)	J	0.82	1.3	PQL	mg/Kg	J (all detects)
SL-057-SA8N-SB-4.0-5.0	EFH (C21-C30)	J	1.0	1.4	PQL	mg/Kg	J (all detects)
SL-062-SA8N-SB-4.0-5.0	EFH (C21-C30)	J	1.0	1.4	PQL	mg/Kg	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-057-SA8N-SB-4.0-5.0	AROCLOR 1254	J	0.93	2.0	PQL	ug/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-056-SA8N-SB-7.0-8.0	TOLUENE	J	0.1	4.2	PQL	ug/Kg	J (all detects)
SL-057-SA8N-SB-4.0-5.0	ACETONE TOLUENE	J J	7.5 0.1	8.1 4.0	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-057-SA8N-SB-7.0-8.0	ACETONE TOLUENE	J J	8.0 0.17	8.8 4.4	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-062-SA8N-SB-4.0-5.0	TOLUENE	J	0.08	4.2	PQL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE144 **Laboratory: LL**

EDD Filename: DE144_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-056-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	32	380	PQL	ug/Kg	J (all detects)
SL-056-SA8N-SB-7.0-8.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	31	360	PQL	ug/Kg	J (all detects)
SL-057-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	25	380	PQL	ug/Kg	J (all detects)
SL-057-SA8N-SB-7.0-8.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	23	360	PQL	ug/Kg	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-056-SA8N-SB-4.0-5.0	BENZO(B)FLUORANTHENE	J	0.95	1.9	PQL	ug/Kg	J (all detects)
SL-057-SA8N-SB-4.0-5.0	BENZO(B)FLUORANTHENE NAPHTHALENE	J J	0.90 0.90	1.9 1.9	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-057-SA8N-SB-7.0-8.0	1-METHYLNAPHTHALENE 2-METHYLNAPHTHALENE	J J	1.0 0.96	1.8 1.8	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-062-SA8N-SB-4.0-5.0	BENZO(B)FLUORANTHENE	J	0.88	1.9	PQL	ug/Kg	J (all detects)

LDC #: 26078H4 **VALIDATION COMPLETENESS WORKSHEET** Date: 8-29-14
SDG #: DE144 ADR Page: 1 of 2
Laboratory: Lancaster Laboratories Reviewer: 82
2nd Reviewer: C

METHOD: Metals (EPA SW 846 Method 6010B/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates:
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	No quals by ICB/CCB
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	SW	MS/D (ICP from SD6: DE151)
VII.	Duplicate Sample Analysis	SW	DUP (↓)
VIII.	Laboratory Control Samples (LCS)	NA	LCS
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	(ICP from DE151)
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	—	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Soil

1	SL-056-SA8N-SB-4.0-5.0	11		21		31	
2	SL-056-SA8N-SB-7.0-8.0	12		22		32	
3	SL-057-SA8N-SB-4.0-5.0	13		23		33	
4	SL-057-SA8N-SB-7.0-8.0	14		24		34	
5	SL-062-SA8N-SB-4.0-5.0	15		25		35	
6	(MS) MS	16		26		36	
7	↓ MSD	17		27		37	
8	✓ DUP	18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: DE144
Matrix: SOIL Level (low/med): LOW

74X

Background Lab Sample ID: 6278711BKG Matrix Spike Lab Sample ID: 6278711MS Matrix Spike Duplicate Lab Sample ID: 6278711MSD
% Solids for Sample: 87.3
Batch Id(s): P12926A

PS 8R 119

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	Control Limit RPD	M
Antimony	121	0.4386		0.7436		0.4683		1.3345	1.3217	MG/KG	23	N	2	N	45	*	75 - 125	20	MS
Arsenic	75	10.5868		9.1416		9.8489		2.2242	2.2028	MG/KG	-65		-33		7			20	MS
Barium	137	141.6204		169.6193		176.6896		11.1211	11.0142	MG/KG	252		318		4			20	MS
Beryllium	9	1.0682		2.0703		2.0605		0.8897	0.8811	MG/KG	113		113		0		75 - 125	20	MS
Cadmium	111	0.4923		1.8837		1.9440		1.1121	1.1014	MG/KG	125		132	N	3		75 - 125	20	MS
Chromium	52	26.2578		43.4613		44.9379		11.1211	11.0142	MG/KG	155	N	170	N	3		75 - 125	20	MS
Cobalt	59	12.7434		86.9004		92.2328		55.6056	55.0709	MG/KG	133	N	144	N	6		75 - 125	20	MS
Copper	63	17.5104		32.7628		34.9150		11.1211	11.0142	MG/KG	137	N	158	N	6		75 - 125	20	MS
Lead	208	18.4686		14.5353		15.2569		3.3363	3.3043	MG/KG	-118		-97		5			20	MS
Molybdenum	98	1.3924		13.7168		14.3096		11.1211	11.0142	MG/KG	111		117		4		75 - 125	20	MS
Nickel	60	23.6585		35.6098		38.3514		11.1211	11.0142	MG/KG	107		133	N	7		75 - 125	20	MS
Selenium	78	0.2879	B	2.8359		2.7866		2.2242	2.2028	MG/KG	115		113		2		75 - 125	20	MS
Silver	107	0.0402	B	14.3863		14.5343		11.1211	11.0142	MG/KG	129	N	132	N	1		75 - 125	20	MS
Thallium	203	0.2965		1.0647		0.9970		0.4448	0.4406	MG/KG	173	N	159	N	7		75 - 125	20	MS
Vanadium	51	70.6450		71.1084		76.7028		11.1211	11.0142	MG/KG	4		55		8			20	MS
Zinc	66	67.9135		72.5987		81.9235		11.1211	11.0142	MG/KG	42		127		12			20	MS

DE144 2926

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: DE144
Matrix: SOIL Level (low/med): LOW

<5xRL

Background Lab Sample ID: 6278711BKG
% Solids for Duplicate: 87.3
Batch ID(s): P12926A
Concentration Units: MG/KG

Duplicate Lab Sample ID: 6278711DUP
% Solids for Sample: 87.3

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Antimony	121	0.2	0.4386		0.1121	B	119	*	MS
Arsenic	75		10.5868		4.4907		81	*	MS
Barium	137		141.6204		110.6329		25	*	MS
Beryllium	9		1.0682		0.6646		47	*	MS
Cadmium	111	0.1	0.4923		0.2674		59	*	MS
Chromium	52		26.2578		20.6831		24	*	MS
Cobalt	59		12.7434		8.8035		37	*	MS
Copper	63		17.5104		12.8783		30	*	MS
Lead	208		18.4686		6.8929		91	*	MS
Molybdenum	98	0.1	1.3924		0.5432		88	*	MS
Nickel	60		23.6585		14.9690		45	*	MS
Selenium	78		0.2879	B	0.2278	B	23		MS
Silver	107		0.0402	B	0.0284	B	34		MS
Thallium	203	0.1	0.2965		0.2747		8		MS
Vanadium	51		70.6450		38.5013		59	*	MS
Zinc	66		67.9135		46.8422		37	*	MS

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

→ out by difference D= 0.8492 (≤0.22)

DE144 3144

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	FLAGS:
AF = Cold Vapor Atomic Fluorescence	* = Duplicate Out of Spec

SAMPLE DELIVERY GROUP

DE145

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
06-May-2011	TB-050611	6279802	TB	5030B	8260B	III
06-May-2011	TB-050611	6279802	TB	5030B	8260B SIM	III
06-May-2011	SL-086-SA8N-SB-6.5-7.5	6279801	N	3050B	6010B	III
06-May-2011	SL-086-SA8N-SB-6.5-7.5	6279801	N	3050B	6020	III
06-May-2011	SL-086-SA8N-SB-6.5-7.5	6279801	N	3060A	7199	III
06-May-2011	SL-086-SA8N-SB-6.5-7.5	6279801	N	3550B	8082	III
06-May-2011	SL-086-SA8N-SB-6.5-7.5	6279801	N	3550B	8270C	III
06-May-2011	SL-086-SA8N-SB-6.5-7.5	6279801	N	3550B	8270C SIM	III
06-May-2011	SL-086-SA8N-SB-6.5-7.5	6279801	N	5035	8260B	III
06-May-2011	SL-086-SA8N-SB-6.5-7.5	6279801	N	5035	8260B SIM	III
06-May-2011	SL-086-SA8N-SB-6.5-7.5	6279801	N	METHOD	300.0	III
06-May-2011	SL-086-SA8N-SB-6.5-7.5	6279801	N	METHOD	314.0	III
06-May-2011	SL-086-SA8N-SB-6.5-7.5	6279801	N	METHOD	7471A	III
06-May-2011	SL-086-SA8N-SB-6.5-7.5DUP	P279801D220519	DUP	METHOD	7471A	III
06-May-2011	SL-086-SA8N-SB-6.5-7.5MSD	P279801M220521	MSD	METHOD	7471A	III
06-May-2011	SL-086-SA8N-SB-6.5-7.5MS	P279801R220520	MS	METHOD	7471A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE145 **Laboratory:** LL

EDD Filename: DE145_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-086-SA8N-SB-6.5-7.5 *Collected:* 5/6/2011 9:00:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	343		0.0856	MDL	0.549	PQL	mg/Kg	J	E
POTASSIUM	5020		19.8	MDL	54.9	PQL	mg/Kg	J	E
TIN	2.20	J	1.10	MDL	11.0	PQL	mg/Kg	U	B
Zirconium	2.00	J	0.922	MDL	5.49	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-086-SA8N-SB-6.5-7.5 *Collected:* 5/6/2011 9:00:00 AM *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.333	J	0.0426	MDL	0.426	PQL	mg/Kg	J	Z

Sample ID: SL-086-SA8N-SB-6.5-7.5 *Collected:* 5/6/2011 9:00:00 AM *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.249		0.0533	MDL	0.107	PQL	mg/Kg	J	E

Sample ID: SL-086-SA8N-SB-6.5-7.5 *Collected:* 5/6/2011 9:00:00 AM *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	157		0.115	MDL	0.426	PQL	mg/Kg	J	E

Sample ID: SL-086-SA8N-SB-6.5-7.5 *Collected:* 5/6/2011 9:00:00 AM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0924	J	0.0639	MDL	0.213	PQL	mg/Kg	J	Z, Q, E
ARSENIC	8.18		0.0853	MDL	0.426	PQL	mg/Kg	J	E
BERYLLIUM	1.01		0.0171	MDL	0.107	PQL	mg/Kg	J	E
CADMIUM	0.387		0.0426	MDL	0.107	PQL	mg/Kg	J	Q
CHROMIUM	38.6		0.128	MDL	0.426	PQL	mg/Kg	J	E, Q
COBALT	14.5		0.0213	MDL	0.107	PQL	mg/Kg	J	Q, E
COPPER	23.5		0.0703	MDL	0.426	PQL	mg/Kg	J	Q, E
LEAD	12.4		0.0111	MDL	0.213	PQL	mg/Kg	J	E
NICKEL	27.7		0.107	MDL	0.426	PQL	mg/Kg	J	Q, E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE145 **Laboratory: LL**

EDD Filename: DE145_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-086-SA8N-SB-6.5-7.5 *Collected:* 5/6/2011 9:00:00 AM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0452	J	0.0128	MDL	0.107	PQL	mg/Kg	J	Z, Q
THALLIUM	0.449		0.0320	MDL	0.107	PQL	mg/Kg	J	Q
VANADIUM	85.1		0.0234	MDL	0.107	PQL	mg/Kg	J	E
ZINC	95.1		0.597	MDL	3.20	PQL	mg/Kg	J	E

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-086-SA8N-SB-6.5-7.5 *Collected:* 5/6/2011 9:00:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	24	J	18	MDL	360	PQL	ug/Kg	U	B

Method Category: VOA

Method: 8260B **Matrix: SO**

Sample ID: SL-086-SA8N-SB-6.5-7.5 *Collected:* 5/6/2011 9:00:00 AM *Analysis Type:* RES *Dilution:* 0.98

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,4-TRIMETHYLBENZENE	0.57	J	0.43	MDL	4.3	PQL	ug/Kg	J	Z
1,3,5-TRIMETHYLBENZENE	0.36	J	0.11	MDL	4.3	PQL	ug/Kg	J	Z
BENZENE	0.11	J	0.11	MDL	4.3	PQL	ug/Kg	J	Z
ETHYLBENZENE	0.46	J	0.06	MDL	4.3	PQL	ug/Kg	J	Z
m,p-Xylene	1.6	J	0.18	MDL	4.3	PQL	ug/Kg	J	Z
METHYLENE CHLORIDE	6.9		0.26	MDL	4.3	PQL	ug/Kg	U	B
O-XYLENE	0.49	J	0.18	MDL	4.3	PQL	ug/Kg	J	Z
TOLUENE	1.5	J	0.09	MDL	4.3	PQL	ug/Kg	J	Z
TRICHLOROETHENE	0.26	J	0.16	MDL	4.3	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE145 **Laboratory: LL**

EDD Filename: PrepDE145_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
	Sampling to Leaching Estimation
	Sampling to Leaching Rejection
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Continuing Calibration Verification Percent Recovery Lower Estimation
C	Continuing Calibration Verification Percent Recovery Lower Rejection
C	Continuing Calibration Verification Percent Recovery Upper Estimation
C	Continuing Calibration Verification Percent Recovery Upper Rejection
C	Continuing Calibration Verification Relative Response Factor
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Relative Response Factor
C	Initial Calibration Verification Correlation Coefficient

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE145 **Laboratory: LL**

EDD Filename: PrepDE145_v1 **eQAPP Name: CDM_SSFL_110509**

C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Lower Estimation
C	Initial Calibration Verification Percent Recovery Lower Rejection
C	Initial Calibration Verification Percent Recovery Upper Estimation
C	Initial Calibration Verification Percent Recovery Upper Rejection
C	Initial Calibration Verification Relative Response Factor
E	Laboratory Control Precision
E	Laboratory Duplicate Precision
E	Laboratory Triplicate Precision
E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE145 **Laboratory: LL**

EDD Filename: PrepDE145_v1 **eQAPP Name: CDM_SSFL_110509**

L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Laboratory Triplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
Q	Matrix Spike Upper Rejection
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE145

Method Blank Outlier Report

Lab Reporting Batch ID: DE145 **Laboratory: LL**

EDD Filename: DE145_v1. **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P12908AB220953	5/10/2011 9:53:00 AM	ALUMINUM CALCIUM MAGNESIUM PHOSPHORUS TIN	12.4 mg/Kg 17.6 mg/Kg 3.88 mg/Kg 2.28 mg/Kg 1.46 mg/Kg	SL-086-SA8N-SB-6.5-7.5

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-086-SA8N-SB-6.5-7.5(RES)	TIN	2.20 mg/Kg	2.20U mg/Kg

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P12926AB220810A	5/13/2011 8:10:00 AM	COPPER	0.503 mg/Kg	SL-086-SA8N-SB-6.5-7.5
P12926AB221123A	5/11/2011 11:23:00 AM	VANADIUM ZINC	0.0744 mg/Kg 0.738 mg/Kg	SL-086-SA8N-SB-6.5-7.5

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB51B210326A	5/11/2011 3:26:00 AM	METHYLENE CHLORIDE TOLUENE	0.92 ug/Kg 0.09 ug/Kg	SL-086-SA8N-SB-6.5-7.5

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-086-SA8N-SB-6.5-7.5(RES)	METHYLENE CHLORIDE	6.9 ug/Kg	6.9U ug/Kg

Method: **8270C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKLA12B262311	5/10/2011 11:11:00 PM	BIS(2-ETHYLHEXYL)PHTHALATE	17 ug/Kg	SL-086-SA8N-SB-6.5-7.5

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-086-SA8N-SB-6.5-7.5(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	24 ug/Kg	360U ug/Kg

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Method Blank Outlier Report

Lab Reporting Batch ID: DE145 **Laboratory: LL**

EDD Filename: DE145_v1. **eQAPP Name: CDM_SSFL_110509**

Method: **8270C SIM**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKLB12B260748	5/18/2011 7:48:00 AM	ANTHRACENE CHRYSENE Di-n-octylphthalate PHENANTHRENE	0.72 ug/Kg 0.37 ug/Kg 34 ug/Kg 0.83 ug/Kg	SL-086-SA8N-SB-6.5-7.5

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE145 **Laboratory: LL**

EDD Filename: DE145_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P12926AQ221126A (SL-086-SA8N-SB-6.5-7.5)	ANTIMONY	64	-	80.00-120.00	-	ANTIMONY	No Qual SRM within QC limits

Method: 8260B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCSB51Q210349A LCSB51Y210413A (SL-086-SA8N-SB-6.5-7.5)	BROMOCHLOROMETHANE	128	128	79.00-124.00	-	BROMOCHLOROMETHANE	J(all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE145 **Laboratory: LL**

EDD Filename: DE145_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-086-SA8N-SB-6.5-7.5	TIN	J	2.20	11.0	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.00	5.49	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-086-SA8N-SB-6.5-7.5	ANTIMONY	J	0.0924	0.213	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.333	0.426	PQL	mg/Kg	
	SILVER	J	0.0452	0.107	PQL	mg/Kg	

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-086-SA8N-SB-6.5-7.5	1,2,4-TRIMETHYLBENZENE	J	0.57	4.3	PQL	ug/Kg	J (all detects)
	1,3,5-TRIMETHYLBENZENE	J	0.36	4.3	PQL	ug/Kg	
	BENZENE	J	0.11	4.3	PQL	ug/Kg	
	ETHYLBENZENE	J	0.46	4.3	PQL	ug/Kg	
	m,p-Xylene	J	1.6	4.3	PQL	ug/Kg	
	O-XYLENE	J	0.49	4.3	PQL	ug/Kg	
	TOLUENE	J	1.5	4.3	PQL	ug/Kg	
	TRICHLOROETHENE	J	0.26	4.3	PQL	ug/Kg	

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-086-SA8N-SB-6.5-7.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	24	360	PQL	ug/Kg	J (all detects)

LDC #: 26078I4 **VALIDATION COMPLETENESS WORKSHEET** Date: 8/29/11
SDG #: DE145 ADR Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: AC
2nd Reviewer: A

METHOD: Metals (EPA SW 846 Method 6010B/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates:
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	No quals for ICB/CCB
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	N	MS MSD (~~A~~ from DE144, ICP from DE151)
VII.	Duplicate Sample Analysis	N	DUP ↓
VIII.	Laboratory Control Samples (LCS)	~~N~~ A	LCS
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	MS from DE144, ICP from DE151
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	—	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	SL-086-SA8N-SB-6.5-7.5	11		21		31	
2	↓ MS (also only)	12		22		32	
3	MSD	13		23		33	
4	↓ DUP ↓	14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

SAMPLE DELIVERY GROUP

DE146

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-May-2011	TB-050911	6281105	TB	5030B	8015M	III
09-May-2011	TB-050911	6281105	TB	5030B	8260B	III
09-May-2011	TB-050911	6281105	TB	5030B	8260B SIM	III
09-May-2011	SL-078-SA8N-SB-4.0-5.0	6281095	N	3050B	6010B	III
09-May-2011	SL-078-SA8N-SB-4.0-5.0	6281095	N	3050B	6020	III
09-May-2011	SL-078-SA8N-SB-4.0-5.0	6281095	N	3060A	7199	III
09-May-2011	SL-078-SA8N-SB-4.0-5.0	6281095	N	3546	1625C	III
09-May-2011	SL-078-SA8N-SB-4.0-5.0	6281095	N	3550B	8015B	III
09-May-2011	SL-078-SA8N-SB-4.0-5.0	6281095	N	3550B	8015M	III
09-May-2011	SL-078-SA8N-SB-4.0-5.0	6281095	N	3550B	8082	III
09-May-2011	SL-078-SA8N-SB-4.0-5.0	6281095	N	3550B	8270C	III
09-May-2011	SL-078-SA8N-SB-4.0-5.0	6281095	N	3550B	8270C SIM	III
09-May-2011	SL-078-SA8N-SB-4.0-5.0	6281095	N	5035	8015M	III
09-May-2011	SL-078-SA8N-SB-4.0-5.0	6281095	N	5035	8260B	III
09-May-2011	SL-078-SA8N-SB-4.0-5.0	6281095	N	5035	8260B SIM	III
09-May-2011	SL-078-SA8N-SB-4.0-5.0	6281095	N	8330	8330A	III
09-May-2011	SL-078-SA8N-SB-4.0-5.0	6281095	N	METHOD	300.0	III
09-May-2011	SL-078-SA8N-SB-4.0-5.0	6281095	N	METHOD	314.0	III
09-May-2011	SL-078-SA8N-SB-4.0-5.0	6281095	N	METHOD	6850	III
09-May-2011	SL-078-SA8N-SB-4.0-5.0	6281095	N	METHOD	7471A	III
09-May-2011	SL-078-SA8N-SB-4.0-5.0	6281095	N	METHOD	8015B	III
09-May-2011	SL-078-SA8N-SB-4.0-5.0	6281095	N	METHOD	8015M	III
09-May-2011	SL-078-SA8N-SB-4.0-5.0	6281095	N	METHOD	8315A	III
09-May-2011	SL-078-SA8N-SB-4.0-5.0	6281095	N	METHOD	9012B	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0	6281100	N	3050B	6010B	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0	6281100	N	3050B	6020	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-May-2011	SL-141-SA8N-SB-4.0-5.0	6281100	N	3060A	7199	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0	6281100	N	3546	1625C	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0	6281100	N	3550B	8015B	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0	6281100	N	3550B	8015M	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0	6281100	N	3550B	8082	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0	6281100	N	3550B	8270C	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0	6281100	N	3550B	8270C SIM	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0	6281100	N	5035	8015M	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0	6281100	N	5035	8260B	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0	6281100	N	5035	8260B SIM	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0	6281100	N	8330	8330A	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0	6281100	N	METHOD	300.0	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0	6281100	N	METHOD	314.0	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0	6281100	N	METHOD	7471A	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0	6281100	N	METHOD	8015B	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0	6281100	N	METHOD	8015M	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0	6281100	N	METHOD	8315A	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0	6281100	N	METHOD	9012B	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MS	6281101	MS	3050B	6010B	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MS	6281101	MS	3050B	6020	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MS	6281101	MS	3060A	7199	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MS	6281101	MS	3546	1625C	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MS	6281101	MS	3550B	8015B	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MS	6281101	MS	3550B	8015M	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MS	6281101	MS	3550B	8082	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MS	6281101	MS	3550B	8270C	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-May-2011	SL-141-SA8N-SB-4.0-5.0MS	6281101	MS	3550B	8270C SIM	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MS	6281101	MS	5035	8015M	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MS	6281101	MS	5035	8260B	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MS	6281101	MS	5035	8260B SIM	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MS	6281101	MS	8330	8330A	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MS	6281101	MS	METHOD	300.0	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MS	6281101	MS	METHOD	314.0	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MS	6281101	MS	METHOD	7471A	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MS	6281101	MS	METHOD	8015B	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MS	6281101	MS	METHOD	8015M	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MS	6281101	MS	METHOD	8315A	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MS	6281101	MS	METHOD	9012B	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MSD	6281102	MSD	3050B	6010B	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MSD	6281102	MSD	3050B	6020	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MSD	6281102	MSD	3546	1625C	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MSD	6281102	MSD	3550B	8015B	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MSD	6281102	MSD	3550B	8015M	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MSD	6281102	MSD	3550B	8082	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MSD	6281102	MSD	3550B	8270C	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MSD	6281102	MSD	3550B	8270C SIM	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MSD	6281102	MSD	5035	8015M	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MSD	6281102	MSD	5035	8260B	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MSD	6281102	MSD	5035	8260B SIM	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MSD	6281102	MSD	8330	8330A	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MSD	6281102	MSD	METHOD	7471A	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MSD	6281102	MSD	METHOD	8015B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-May-2011	SL-141-SA8N-SB-4.0-5.0MSD	6281102	MSD	METHOD	8015M	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0MSD	6281102	MSD	METHOD	8315A	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0DUP	6281103	DUP	3050B	6010B	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0DUP	6281103	DUP	3050B	6020	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0DUP	6281103	DUP	3060A	7199	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0DUP	6281103	DUP	METHOD	300.0	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0DUP	6281103	DUP	METHOD	314.0	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0DUP	6281103	DUP	METHOD	7471A	III
09-May-2011	SL-141-SA8N-SB-4.0-5.0DUP	6281103	DUP	METHOD	9012B	III
09-May-2011	DUP08-SA8N-QC-050911	6281104	FD	3050B	6010B	III
09-May-2011	DUP08-SA8N-QC-050911	6281104	FD	3050B	6020	III
09-May-2011	DUP08-SA8N-QC-050911	6281104	FD	3060A	7199	III
09-May-2011	DUP08-SA8N-QC-050911	6281104	FD	3546	1625C	III
09-May-2011	DUP08-SA8N-QC-050911	6281104	FD	3550B	8015B	III
09-May-2011	DUP08-SA8N-QC-050911	6281104	FD	3550B	8015M	III
09-May-2011	DUP08-SA8N-QC-050911	6281104	FD	3550B	8082	III
09-May-2011	DUP08-SA8N-QC-050911	6281104	FD	3550B	8270C	III
09-May-2011	DUP08-SA8N-QC-050911	6281104	FD	3550B	8270C SIM	III
09-May-2011	DUP08-SA8N-QC-050911	6281104	FD	5035	8015M	III
09-May-2011	DUP08-SA8N-QC-050911	6281104	FD	5035	8260B	III
09-May-2011	DUP08-SA8N-QC-050911	6281104	FD	5035	8260B SIM	III
09-May-2011	DUP08-SA8N-QC-050911	6281104	FD	8330	8330A	III
09-May-2011	DUP08-SA8N-QC-050911	6281104	FD	METHOD	300.0	III
09-May-2011	DUP08-SA8N-QC-050911	6281104	FD	METHOD	314.0	III
09-May-2011	DUP08-SA8N-QC-050911	6281104	FD	METHOD	7471A	III
09-May-2011	DUP08-SA8N-QC-050911	6281104	FD	METHOD	8015B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-May-2011	DUP08-SA8N-QC-050911	6281104	FD	METHOD	8015M	III
09-May-2011	DUP08-SA8N-QC-050911	6281104	FD	METHOD	8315A	III
09-May-2011	DUP08-SA8N-QC-050911	6281104	FD	METHOD	9012B	III
09-May-2011	SL-135-SA8N-SB-2.0-3.0	6281099	N	3050B	6010B	III
09-May-2011	SL-135-SA8N-SB-2.0-3.0	6281099	N	3050B	6020	III
09-May-2011	SL-135-SA8N-SB-2.0-3.0	6281099	N	3060A	7199	III
09-May-2011	SL-135-SA8N-SB-2.0-3.0	6281099	N	3546	1625C	III
09-May-2011	SL-135-SA8N-SB-2.0-3.0	6281099	N	3550B	8015B	III
09-May-2011	SL-135-SA8N-SB-2.0-3.0	6281099	N	3550B	8015M	III
09-May-2011	SL-135-SA8N-SB-2.0-3.0	6281099	N	3550B	8082	III
09-May-2011	SL-135-SA8N-SB-2.0-3.0	6281099	N	3550B	8270C	III
09-May-2011	SL-135-SA8N-SB-2.0-3.0	6281099	N	3550B	8270C SIM	III
09-May-2011	SL-135-SA8N-SB-2.0-3.0	6281099	N	5035	8015M	III
09-May-2011	SL-135-SA8N-SB-2.0-3.0	6281099	N	5035	8260B	III
09-May-2011	SL-135-SA8N-SB-2.0-3.0	6281099	N	5035	8260B SIM	III
09-May-2011	SL-135-SA8N-SB-2.0-3.0	6281099	N	8330	8330A	III
09-May-2011	SL-135-SA8N-SB-2.0-3.0	6281099	N	METHOD	300.0	III
09-May-2011	SL-135-SA8N-SB-2.0-3.0	6281099	N	METHOD	314.0	III
09-May-2011	SL-135-SA8N-SB-2.0-3.0	6281099	N	METHOD	7471A	III
09-May-2011	SL-135-SA8N-SB-2.0-3.0	6281099	N	METHOD	8015B	III
09-May-2011	SL-135-SA8N-SB-2.0-3.0	6281099	N	METHOD	8015M	III
09-May-2011	SL-135-SA8N-SB-2.0-3.0	6281099	N	METHOD	8315A	III
09-May-2011	SL-135-SA8N-SB-2.0-3.0	6281099	N	METHOD	9012B	III
09-May-2011	SL-088-SA8N-SB-3.0-4.0	6281098	N	3050B	6010B	III
09-May-2011	SL-088-SA8N-SB-3.0-4.0	6281098	N	3050B	6020	III
09-May-2011	SL-088-SA8N-SB-3.0-4.0	6281098	N	3060A	7199	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-May-2011	SL-088-SA8N-SB-3.0-4.0	6281098	N	3546	1625C	III
09-May-2011	SL-088-SA8N-SB-3.0-4.0	6281098	N	3550B	8015B	III
09-May-2011	SL-088-SA8N-SB-3.0-4.0	6281098	N	3550B	8015M	III
09-May-2011	SL-088-SA8N-SB-3.0-4.0	6281098	N	3550B	8082	III
09-May-2011	SL-088-SA8N-SB-3.0-4.0	6281098	N	3550B	8270C	III
09-May-2011	SL-088-SA8N-SB-3.0-4.0	6281098	N	3550B	8270C SIM	III
09-May-2011	SL-088-SA8N-SB-3.0-4.0	6281098	N	5035	8015M	III
09-May-2011	SL-088-SA8N-SB-3.0-4.0	6281098	N	5035	8260B	III
09-May-2011	SL-088-SA8N-SB-3.0-4.0	6281098	N	5035	8260B SIM	III
09-May-2011	SL-088-SA8N-SB-3.0-4.0	6281098	N	8330	8330A	III
09-May-2011	SL-088-SA8N-SB-3.0-4.0	6281098	N	METHOD	300.0	III
09-May-2011	SL-088-SA8N-SB-3.0-4.0	6281098	N	METHOD	314.0	III
09-May-2011	SL-088-SA8N-SB-3.0-4.0	6281098	N	METHOD	7471A	III
09-May-2011	SL-088-SA8N-SB-3.0-4.0	6281098	N	METHOD	8015B	III
09-May-2011	SL-088-SA8N-SB-3.0-4.0	6281098	N	METHOD	8015M	III
09-May-2011	SL-088-SA8N-SB-3.0-4.0	6281098	N	METHOD	8315A	III
09-May-2011	SL-088-SA8N-SB-3.0-4.0	6281098	N	METHOD	9012B	III
09-May-2011	SL-087-SA8N-SB-9.0-10.0	6281097	N	3050B	6010B	III
09-May-2011	SL-087-SA8N-SB-9.0-10.0	6281097	N	3050B	6020	III
09-May-2011	SL-087-SA8N-SB-9.0-10.0	6281097	N	3060A	7199	III
09-May-2011	SL-087-SA8N-SB-9.0-10.0	6281097	N	3546	1625C	III
09-May-2011	SL-087-SA8N-SB-9.0-10.0	6281097	N	3550B	8015B	III
09-May-2011	SL-087-SA8N-SB-9.0-10.0	6281097	N	3550B	8015M	III
09-May-2011	SL-087-SA8N-SB-9.0-10.0	6281097	N	3550B	8082	III
09-May-2011	SL-087-SA8N-SB-9.0-10.0	6281097	N	3550B	8270C	III
09-May-2011	SL-087-SA8N-SB-9.0-10.0	6281097	N	3550B	8270C SIM	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-May-2011	SL-087-SA8N-SB-9.0-10.0	6281097	N	5035	8015M	III
09-May-2011	SL-087-SA8N-SB-9.0-10.0	6281097	N	5035	8260B	III
09-May-2011	SL-087-SA8N-SB-9.0-10.0	6281097	N	5035	8260B SIM	III
09-May-2011	SL-087-SA8N-SB-9.0-10.0	6281097	N	8330	8330A	III
09-May-2011	SL-087-SA8N-SB-9.0-10.0	6281097	N	METHOD	300.0	III
09-May-2011	SL-087-SA8N-SB-9.0-10.0	6281097	N	METHOD	314.0	III
09-May-2011	SL-087-SA8N-SB-9.0-10.0	6281097	N	METHOD	7471A	III
09-May-2011	SL-087-SA8N-SB-9.0-10.0	6281097	N	METHOD	8015B	III
09-May-2011	SL-087-SA8N-SB-9.0-10.0	6281097	N	METHOD	8015M	III
09-May-2011	SL-087-SA8N-SB-9.0-10.0	6281097	N	METHOD	8315A	III
09-May-2011	SL-087-SA8N-SB-9.0-10.0	6281097	N	METHOD	9012B	III
09-May-2011	SL-087-SA8N-SB-4.0-5.0	6281096	N	3050B	6010B	III
09-May-2011	SL-087-SA8N-SB-4.0-5.0	6281096	N	3050B	6020	III
09-May-2011	SL-087-SA8N-SB-4.0-5.0	6281096	N	3060A	7199	III
09-May-2011	SL-087-SA8N-SB-4.0-5.0	6281096	N	3546	1625C	III
09-May-2011	SL-087-SA8N-SB-4.0-5.0	6281096	N	3550B	8015B	III
09-May-2011	SL-087-SA8N-SB-4.0-5.0	6281096	N	3550B	8015M	III
09-May-2011	SL-087-SA8N-SB-4.0-5.0	6281096	N	3550B	8082	III
09-May-2011	SL-087-SA8N-SB-4.0-5.0	6281096	N	3550B	8270C	III
09-May-2011	SL-087-SA8N-SB-4.0-5.0	6281096	N	3550B	8270C SIM	III
09-May-2011	SL-087-SA8N-SB-4.0-5.0	6281096	N	5035	8015M	III
09-May-2011	SL-087-SA8N-SB-4.0-5.0	6281096	N	5035	8260B	III
09-May-2011	SL-087-SA8N-SB-4.0-5.0	6281096	N	5035	8260B SIM	III
09-May-2011	SL-087-SA8N-SB-4.0-5.0	6281096	N	8330	8330A	III
09-May-2011	SL-087-SA8N-SB-4.0-5.0	6281096	N	METHOD	300.0	III
09-May-2011	SL-087-SA8N-SB-4.0-5.0	6281096	N	METHOD	314.0	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-May-2011	SL-087-SA8N-SB-4.0-5.0	6281096	N	METHOD	7471A	III
09-May-2011	SL-087-SA8N-SB-4.0-5.0	6281096	N	METHOD	8015B	III
09-May-2011	SL-087-SA8N-SB-4.0-5.0	6281096	N	METHOD	8015M	III
09-May-2011	SL-087-SA8N-SB-4.0-5.0	6281096	N	METHOD	8315A	III
09-May-2011	SL-087-SA8N-SB-4.0-5.0	6281096	N	METHOD	9012B	III

III = EPA Level 3 Data Review
IV = EPA Level 4 Data Validation
N = Normal Sample
FD = Field Duplicate
TB = Trip Blank
FB = Field Blank
MS = Matrix Spike
MSD = Matrix Spike Duplicate

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE146 **Laboratory:** LL

EDD Filename: PrepDE146_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: DUP08-SA8N-QC-050911 *Collected:* 5/9/2011 9:45:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.9		0.94	MDL	1.2	PQL	mg/Kg	J	Q, FD
Nitrate-NO3	9.8		0.94	MDL	1.8	PQL	mg/Kg	J	FD

Sample ID: SL-078-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 8:45:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.7		0.91	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.3	J	0.91	MDL	1.7	PQL	mg/Kg	J	Z

Sample ID: SL-087-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 3:14:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.8		0.92	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-087-SA8N-SB-9.0-10.0 *Collected:* 5/9/2011 3:12:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.5		0.94	MDL	1.2	PQL	mg/Kg	J	Q
Nitrate-NO3	1.5	J	0.94	MDL	1.8	PQL	mg/Kg	J	Z

Sample ID: SL-088-SA8N-SB-3.0-4.0 *Collected:* 5/9/2011 2:20:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.3		0.92	MDL	1.1	PQL	mg/Kg	J	Q
Nitrate-NO3	1.2	J	0.92	MDL	1.7	PQL	mg/Kg	J	Z

Sample ID: SL-135-SA8N-SB-2.0-3.0 *Collected:* 5/9/2011 1:25:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.5		0.88	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-141-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 9:40:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.5		0.96	MDL	1.2	PQL	mg/Kg	J	Q, FD
Nitrate-NO3	2.0		0.96	MDL	1.8	PQL	mg/Kg	J	FD

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE146 **Laboratory:** LL

EDD Filename: PrepDE146_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM
Method: 300.0 **Matrix:** SO

Method Category: GENCHEM
Method: 314.0 **Matrix:** SO

Sample ID: SL-078-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 8:45:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	17.3	J	10.2	MDL	34.0	PQL	ug/Kg	J	Z

Method Category: METALS
Method: 6010B **Matrix:** SO

Sample ID: DUP08-SA8N-QC-050911 *Collected:* 5/9/2011 9:45:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	26500		6.95	MDL	22.7	PQL	mg/Kg	J	E
TIN	2.95	J	1.13	MDL	11.3	PQL	mg/Kg	U	B

Sample ID: SL-078-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 8:45:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.02	J	0.999	MDL	5.61	PQL	mg/Kg	J	Z
CALCIUM	6880		6.88	MDL	22.5	PQL	mg/Kg	J	E
TIN	3.16	J	1.12	MDL	11.2	PQL	mg/Kg	U	B
Zirconium	5.16	J	0.943	MDL	5.61	PQL	mg/Kg	J	Z

Sample ID: SL-087-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 3:14:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	2.27	J	0.998	MDL	5.61	PQL	mg/Kg	J	Z
CALCIUM	3200		6.87	MDL	22.4	PQL	mg/Kg	J	E
TIN	3.12	J	1.12	MDL	11.2	PQL	mg/Kg	U	B
Zirconium	5.14	J	0.942	MDL	5.61	PQL	mg/Kg	J	Z

Sample ID: SL-087-SA8N-SB-9.0-10.0 *Collected:* 5/9/2011 3:12:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	1.49	J	1.05	MDL	5.90	PQL	mg/Kg	J	Z
CALCIUM	3520		7.23	MDL	23.6	PQL	mg/Kg	J	E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE146 **Laboratory: LL**

EDD Filename: PrepDE146_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-087-SA8N-SB-9.0-10.0 *Collected:* 5/9/2011 3:12:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	3.06	J	1.18	MDL	11.8	PQL	mg/Kg	U	B

Sample ID: SL-088-SA8N-SB-3.0-4.0 *Collected:* 5/9/2011 2:20:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	1.78	J	0.999	MDL	5.62	PQL	mg/Kg	J	Z
CALCIUM	2270		6.88	MDL	22.5	PQL	mg/Kg	J	E
SODIUM	91.0	J	41.9	MDL	112	PQL	mg/Kg	J	Z
TIN	3.00	J	1.12	MDL	11.2	PQL	mg/Kg	U	B
Zirconium	2.14	J	0.943	MDL	5.62	PQL	mg/Kg	J	Z

Sample ID: SL-135-SA8N-SB-2.0-3.0 *Collected:* 5/9/2011 1:25:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	2580		6.71	MDL	21.9	PQL	mg/Kg	J	E
SODIUM	78.7	J	40.9	MDL	110	PQL	mg/Kg	J	Z
TIN	3.09	J	1.10	MDL	11.0	PQL	mg/Kg	U	B
Zirconium	3.29	J	0.920	MDL	5.48	PQL	mg/Kg	J	Z

Sample ID: SL-141-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 9:40:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	30800		7.29	MDL	23.8	PQL	mg/Kg	J	E
TIN	3.14	J	1.19	MDL	11.9	PQL	mg/Kg	U	B
Zirconium	5.89	J	1.00	MDL	5.95	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: DUP08-SA8N-QC-050911 *Collected:* 5/9/2011 9:45:00 AM *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.282	J	0.0462	MDL	0.462	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE146 **Laboratory:** LL

EDD Filename: PrepDE146_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: DUP08-SA8N-QC-050911 ***Collected:*** 5/9/2011 9:45:00 AM ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	113		0.125	MDL	0.462	PQL	mg/Kg	J	E, A

Sample ID: DUP08-SA8N-QC-050911 ***Collected:*** 5/9/2011 9:45:00 AM ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.323		0.0694	MDL	0.231	PQL	mg/Kg	J	Q
ARSENIC	6.87		0.0925	MDL	0.462	PQL	mg/Kg	J	E
BERYLLIUM	0.716		0.0185	MDL	0.116	PQL	mg/Kg	J	E
CHROMIUM	33.1		0.139	MDL	0.462	PQL	mg/Kg	J	Q, E, A
COBALT	11.2		0.0231	MDL	0.116	PQL	mg/Kg	J	E, A
COPPER	17.4		0.0763	MDL	0.462	PQL	mg/Kg	J	E, A
LEAD	9.52		0.0120	MDL	0.231	PQL	mg/Kg	J	E, A
NICKEL	19.5		0.116	MDL	0.462	PQL	mg/Kg	J	E, A
SILVER	0.0342	J	0.0139	MDL	0.116	PQL	mg/Kg	J	Z
VANADIUM	75.2		0.0254	MDL	0.116	PQL	mg/Kg	J	E, A
ZINC	78.9		0.647	MDL	3.47	PQL	mg/Kg	J	E, A

Sample ID: SL-078-SA8N-SB-4.0-5.0 ***Collected:*** 5/9/2011 8:45:00 AM ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.132	J	0.0445	MDL	0.445	PQL	mg/Kg	J	Z

Sample ID: SL-078-SA8N-SB-4.0-5.0 ***Collected:*** 5/9/2011 8:45:00 AM ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	104		0.120	MDL	0.445	PQL	mg/Kg	J	E, A

Sample ID: SL-078-SA8N-SB-4.0-5.0 ***Collected:*** 5/9/2011 8:45:00 AM ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.206	J	0.0667	MDL	0.222	PQL	mg/Kg	J	Z, Q
ARSENIC	6.01		0.0889	MDL	0.445	PQL	mg/Kg	J	E
BERYLLIUM	0.555		0.0178	MDL	0.111	PQL	mg/Kg	J	E
CADMIUM	0.0500	J	0.0445	MDL	0.111	PQL	mg/Kg	J	Z
CHROMIUM	20.3		0.133	MDL	0.445	PQL	mg/Kg	J	Q, E, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE146 **Laboratory:** LL

EDD Filename: PrepDE146_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-078-SA8N-SB-4.0-5.0 ***Collected:*** 5/9/2011 8:45:00 AM ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	7.45		0.0222	MDL	0.111	PQL	mg/Kg	J	E, A
COPPER	10.3		0.0734	MDL	0.445	PQL	mg/Kg	J	E, A
LEAD	5.42		0.0116	MDL	0.222	PQL	mg/Kg	J	E, A
NICKEL	13.0		0.111	MDL	0.445	PQL	mg/Kg	J	E, A
SILVER	0.0734	J	0.0133	MDL	0.111	PQL	mg/Kg	J	Z
VANADIUM	55.2		0.0245	MDL	0.111	PQL	mg/Kg	J	E, A
ZINC	46.1		0.622	MDL	3.33	PQL	mg/Kg	J	E, A

Sample ID: SL-087-SA8N-SB-4.0-5.0 ***Collected:*** 5/9/2011 3:14:00 PM ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.141	J	0.0453	MDL	0.453	PQL	mg/Kg	J	Z

Sample ID: SL-087-SA8N-SB-4.0-5.0 ***Collected:*** 5/9/2011 3:14:00 PM ***Analysis Type:*** REA3 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	102		0.122	MDL	0.453	PQL	mg/Kg	J	E, A

Sample ID: SL-087-SA8N-SB-4.0-5.0 ***Collected:*** 5/9/2011 3:14:00 PM ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.184	J	0.0679	MDL	0.226	PQL	mg/Kg	J	Z, Q
ARSENIC	4.46		0.0906	MDL	0.453	PQL	mg/Kg	J	E
BERYLLIUM	0.578		0.0181	MDL	0.113	PQL	mg/Kg	J	E
CHROMIUM	20.1		0.136	MDL	0.453	PQL	mg/Kg	J	Q, E, A
COBALT	6.96		0.0226	MDL	0.113	PQL	mg/Kg	J	E, A
COPPER	9.40		0.0747	MDL	0.453	PQL	mg/Kg	J	E, A
LEAD	5.51		0.0118	MDL	0.226	PQL	mg/Kg	J	E, A
NICKEL	12.4		0.113	MDL	0.453	PQL	mg/Kg	J	E, A
SILVER	0.0363	J	0.0136	MDL	0.113	PQL	mg/Kg	J	Z
VANADIUM	45.1		0.0249	MDL	0.113	PQL	mg/Kg	J	E, A
ZINC	43.2		0.634	MDL	3.40	PQL	mg/Kg	J	E, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE146 Laboratory: LL

EDD Filename: PrepDE146_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-087-SA8N-SB-9.0-10.0 *Collected:* 5/9/2011 3:12:00 PM *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.107	J	0.0458	MDL	0.458	PQL	mg/Kg	J	Z

Sample ID: SL-087-SA8N-SB-9.0-10.0 *Collected:* 5/9/2011 3:12:00 PM *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	134		0.124	MDL	0.458	PQL	mg/Kg	J	E, A

Sample ID: SL-087-SA8N-SB-9.0-10.0 *Collected:* 5/9/2011 3:12:00 PM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.212	J	0.0687	MDL	0.229	PQL	mg/Kg	J	Z, Q
ARSENIC	6.23		0.0916	MDL	0.458	PQL	mg/Kg	J	E
BERYLLIUM	0.754		0.0183	MDL	0.114	PQL	mg/Kg	J	E
CADMIUM	0.0908	J	0.0458	MDL	0.114	PQL	mg/Kg	J	Z
CHROMIUM	27.6		0.137	MDL	0.458	PQL	mg/Kg	J	Q, E, A
COBALT	9.77		0.0229	MDL	0.114	PQL	mg/Kg	J	E, A
COPPER	11.9		0.0756	MDL	0.458	PQL	mg/Kg	J	E, A
LEAD	6.87		0.0119	MDL	0.229	PQL	mg/Kg	J	E, A
NICKEL	17.6		0.114	MDL	0.458	PQL	mg/Kg	J	E, A
SILVER	0.0538	J	0.0137	MDL	0.114	PQL	mg/Kg	J	Z
VANADIUM	59.6		0.0252	MDL	0.114	PQL	mg/Kg	J	E, A
ZINC	57.2		0.641	MDL	3.43	PQL	mg/Kg	J	E, A

Sample ID: SL-088-SA8N-SB-3.0-4.0 *Collected:* 5/9/2011 2:20:00 PM *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.342	J	0.0449	MDL	0.449	PQL	mg/Kg	J	Z

Sample ID: SL-088-SA8N-SB-3.0-4.0 *Collected:* 5/9/2011 2:20:00 PM *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	106		0.121	MDL	0.449	PQL	mg/Kg	J	E, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE146 Laboratory: LL

EDD Filename: PrepDE146_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-088-SA8N-SB-3.0-4.0 *Collected:* 5/9/2011 2:20:00 PM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.347		0.0674	MDL	0.225	PQL	mg/Kg	J	Q
ARSENIC	5.76		0.0898	MDL	0.449	PQL	mg/Kg	J	E
BERYLLIUM	0.688		0.0180	MDL	0.112	PQL	mg/Kg	J	E
CHROMIUM	22.6		0.135	MDL	0.449	PQL	mg/Kg	J	Q, E, A
COBALT	6.93		0.0225	MDL	0.112	PQL	mg/Kg	J	E, A
COPPER	11.6		0.0741	MDL	0.449	PQL	mg/Kg	J	E, A
LEAD	6.30		0.0117	MDL	0.225	PQL	mg/Kg	J	E, A
NICKEL	14.3		0.112	MDL	0.449	PQL	mg/Kg	J	E, A
SILVER	0.0304	J	0.0135	MDL	0.112	PQL	mg/Kg	J	Z
VANADIUM	51.7		0.0247	MDL	0.112	PQL	mg/Kg	J	E, A
ZINC	65.6		0.629	MDL	3.37	PQL	mg/Kg	J	E, A

Sample ID: SL-135-SA8N-SB-2.0-3.0 *Collected:* 5/9/2011 1:25:00 PM *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.135	J	0.0438	MDL	0.438	PQL	mg/Kg	J	Z

Sample ID: SL-135-SA8N-SB-2.0-3.0 *Collected:* 5/9/2011 1:25:00 PM *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	106		0.118	MDL	0.438	PQL	mg/Kg	J	E, A

Sample ID: SL-135-SA8N-SB-2.0-3.0 *Collected:* 5/9/2011 1:25:00 PM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.100	J	0.0657	MDL	0.219	PQL	mg/Kg	J	Z, Q
ARSENIC	5.36		0.0876	MDL	0.438	PQL	mg/Kg	J	E
BERYLLIUM	0.698		0.0175	MDL	0.110	PQL	mg/Kg	J	E
CHROMIUM	19.3		0.131	MDL	0.438	PQL	mg/Kg	J	Q, E, A
COBALT	8.68		0.0219	MDL	0.110	PQL	mg/Kg	J	E, A
COPPER	8.60		0.0723	MDL	0.438	PQL	mg/Kg	J	E, A
LEAD	8.31		0.0114	MDL	0.219	PQL	mg/Kg	J	E, A
NICKEL	10.7		0.110	MDL	0.438	PQL	mg/Kg	J	E, A
VANADIUM	45.1		0.0241	MDL	0.110	PQL	mg/Kg	J	E, A
ZINC	65.3		0.613	MDL	3.29	PQL	mg/Kg	J	E, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE146 **Laboratory:** LL

EDD Filename: PrepDE146_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-141-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 9:40:00 AM *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.289	J	0.0471	MDL	0.471	PQL	mg/Kg	J	Z

Sample ID: SL-141-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 9:40:00 AM *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	92.9		0.127	MDL	0.471	PQL	mg/Kg	J	E, A

Sample ID: SL-141-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 9:40:00 AM *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.236		0.0707	MDL	0.236	PQL	mg/Kg	J	Q
ARSENIC	6.00		0.0943	MDL	0.471	PQL	mg/Kg	J	E
BERYLLIUM	0.594		0.0189	MDL	0.118	PQL	mg/Kg	J	E
CHROMIUM	27.7		0.141	MDL	0.471	PQL	mg/Kg	J	Q, E, A
COBALT	9.29		0.0236	MDL	0.118	PQL	mg/Kg	J	E, A
COPPER	14.7		0.0778	MDL	0.471	PQL	mg/Kg	J	E, A
LEAD	7.39		0.0123	MDL	0.236	PQL	mg/Kg	J	E, A
NICKEL	16.9		0.118	MDL	0.471	PQL	mg/Kg	J	E, A
SILVER	0.0290	J	0.0141	MDL	0.118	PQL	mg/Kg	J	Z
VANADIUM	62.3		0.0259	MDL	0.118	PQL	mg/Kg	J	E, A
ZINC	69.4		0.660	MDL	3.54	PQL	mg/Kg	J	E, A

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: SL-087-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 3:14:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.36	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-087-SA8N-SB-9.0-10.0 *Collected:* 5/9/2011 3:12:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.34	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE146 **Laboratory:** LL

EDD Filename: PrepDE146_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7471A **Matrix:** SO

Sample ID: SL-087-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 3:14:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0042	J	0.0031	MDL	0.109	PQL	mg/Kg	J	Z

Sample ID: SL-088-SA8N-SB-3.0-4.0 *Collected:* 5/9/2011 2:20:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0056	J	0.0032	MDL	0.113	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 1625C **Matrix:** SO

Sample ID: DUP08-SA8N-QC-050911 *Collected:* 5/9/2011 9:45:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	23.5	J	19.7	MDL	39.3	PQL	ng/Kg	J	Z, S, FD

Sample ID: SL-087-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 3:14:00 PM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	22.2	J	19.3	MDL	38.5	PQL	ng/Kg	J	Z

Sample ID: SL-141-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 9:40:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	200	U	200	MDL	401	PQL	ng/Kg	UJ	FD

Method Category: SVOA

Method: 8015M **Matrix:** SO

Sample ID: DUP08-SA8N-QC-050911 *Collected:* 5/9/2011 9:45:00 AM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.77	J	0.47	MDL	1.4	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE146 **Laboratory: LL**

EDD Filename: PrepDE146_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-087-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 3:14:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.83	J	0.46	MDL	1.4	PQL	mg/Kg	J	Z

Sample ID: SL-088-SA8N-SB-3.0-4.0 *Collected:* 5/9/2011 2:20:00 PM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.60	J	0.46	MDL	1.4	PQL	mg/Kg	J	Z

Sample ID: SL-141-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 9:40:00 AM *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIETHYLENE GLYCOL	6.0	U	6.0	MDL	12	PQL	mg/Kg	UJ	Q
ETHYLENE GLYCOL	6.0	U	6.0	MDL	12	PQL	mg/Kg	UJ	Q
Propylene glycol	6.0	U	6.0	MDL	12	PQL	mg/Kg	UJ	Q

Sample ID: SL-141-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 9:40:00 AM *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.85	J	0.48	MDL	1.4	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: SL-135-SA8N-SB-2.0-3.0 *Collected:* 5/9/2011 1:25:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	1.5	J	1.1	MDL	3.6	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-141-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 9:40:00 AM *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	400	U	400	MDL	1200	PQL	ug/Kg	UJ	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE146 **Laboratory:** LL

EDD Filename: PrepDE146_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: DUP08-SA8N-QC-050911 *Collected:* 5/9/2011 9:45:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	0.91	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z, FD

Sample ID: SL-088-SA8N-SB-3.0-4.0 *Collected:* 5/9/2011 2:20:00 PM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.83	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z
NAPHTHALENE	1.1	J	0.76	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-135-SA8N-SB-2.0-3.0 *Collected:* 5/9/2011 1:25:00 PM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	1.2	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	6.7	J	6.5	MDL	20	PQL	ug/Kg	J	Z
NAPHTHALENE	1.2	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-141-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 9:40:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.79	U	0.79	MDL	2.0	PQL	ug/Kg	UJ	Q
2-METHYLNAPHTHALENE	0.79	U	0.79	MDL	2.0	PQL	ug/Kg	UJ	Q
NAPHTHALENE	0.79	U	0.79	MDL	2.0	PQL	ug/Kg	UJ	FD

Method Category: SVOA

Method: 8330A **Matrix:** SO

Sample ID: SL-141-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 9:40:00 AM *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,3,5-TRINITROBENZENE	46	U	46	MDL	140	PQL	ug/Kg	UJ	Q
2,4,6-TRINITROTOLUENE	46	U	46	MDL	140	PQL	ug/Kg	UJ	Q
2,4-DINITROTOLUENE	46	U	46	MDL	140	PQL	ug/Kg	UJ	Q
2,6-DINITROTOLUENE	46	U	46	MDL	140	PQL	ug/Kg	UJ	Q
2-AMINO-4,6-DINITROTOLUENE	46	U	46	MDL	140	PQL	ug/Kg	UJ	Q
2-NITROTOLUENE	92	U	92	MDL	140	PQL	ug/Kg	UJ	Q
4-AMINO-2,6-DINITROTOLUENE	69	U	69	MDL	140	PQL	ug/Kg	UJ	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE146 **Laboratory:** LL

EDD Filename: PrepDE146_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8330A **Matrix:** SO

Sample ID: SL-141-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 9:40:00 AM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4-NITROTOLUENE	92	U	92	MDL	140	PQL	ug/Kg	UJ	Q
HMX	120	U	120	MDL	350	PQL	ug/Kg	UJ	Q
Nitroglycerin	920	U	920	MDL	2800	PQL	ug/Kg	UJ	Q
RDX	58	U	58	MDL	140	PQL	ug/Kg	UJ	Q

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: DUP08-SA8N-QC-050911 *Collected:* 5/9/2011 9:45:00 AM *Analysis Type:* RES *Dilution:* 0.88

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	9.5		7.0	MDL	8.3	PQL	ug/Kg	J	FD
CHLOROFORM	0.13	U	0.13	MDL	4.2	PQL	ug/Kg	UJ	FD
TOLUENE	0.08	J	0.08	MDL	4.2	PQL	ug/Kg	U	B
TRICHLOROETHENE	6.3		0.16	MDL	4.2	PQL	ug/Kg	J	FD

Sample ID: SL-087-SA8N-SB-9.0-10.0 *Collected:* 5/9/2011 3:12:00 PM *Analysis Type:* RES *Dilution:* 0.8

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOLUENE	0.1	J	0.08	MDL	3.8	PQL	ug/Kg	U	B

Sample ID: SL-135-SA8N-SB-2.0-3.0 *Collected:* 5/9/2011 1:25:00 PM *Analysis Type:* RES *Dilution:* 0.98

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLOROFORM	0.14	J	0.13	MDL	4.4	PQL	ug/Kg	J	Z
TOLUENE	0.09	J	0.09	MDL	4.4	PQL	ug/Kg	U	B

Sample ID: SL-141-SA8N-SB-4.0-5.0 *Collected:* 5/9/2011 9:40:00 AM *Analysis Type:* RES *Dilution:* 0.94

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	7.6	U	7.6	MDL	9.1	PQL	ug/Kg	UJ	FD
CHLOROFORM	0.16	J	0.14	MDL	4.5	PQL	ug/Kg	J	Z, FD
METHYLENE CHLORIDE	30		0.27	MDL	4.5	PQL	ug/Kg	J	Q, Q, Q
TOLUENE	0.09	J	0.09	MDL	4.5	PQL	ug/Kg	U	B
TRICHLOROETHENE	17		0.17	MDL	4.5	PQL	ug/Kg	J	Q, FD

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE146 **Laboratory: LL**

EDD Filename: PrepDE146_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category:	**VOA**		
Method:	**8260B**	***Matrix:***	**SO**

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE146 **Laboratory: LL**

EDD Filename: PrepDE146_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE146 **Laboratory: LL**

EDD Filename: PrepDE146_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE146 **Laboratory: LL**

EDD Filename: PrepDE146_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE146

Method Blank Outlier Report

Lab Reporting Batch ID: DE146 **Laboratory: LL**

EDD Filename: DE146_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P13008BB220541	5/11/2011 5:41:00 AM	ALUMINUM PHOSPHORUS TIN	6.76 mg/Kg 1.62 mg/Kg 1.61 mg/Kg	DUP08-SA8N-QC-050911 SL-078-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-9.0-10.0 SL-088-SA8N-SB-3.0-4.0 SL-135-SA8N-SB-2.0-3.0 SL-141-SA8N-SB-4.0-5.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP08-SA8N-QC-050911(RES)	TIN	2.95 mg/Kg	2.95U mg/Kg
SL-078-SA8N-SB-4.0-5.0(RES)	TIN	3.16 mg/Kg	3.16U mg/Kg
SL-087-SA8N-SB-4.0-5.0(RES)	TIN	3.12 mg/Kg	3.12U mg/Kg
SL-087-SA8N-SB-9.0-10.0(RES)	TIN	3.06 mg/Kg	3.06U mg/Kg
SL-088-SA8N-SB-3.0-4.0(RES)	TIN	3.00 mg/Kg	3.00U mg/Kg
SL-135-SA8N-SB-2.0-3.0(RES)	TIN	3.09 mg/Kg	3.09U mg/Kg
SL-141-SA8N-SB-4.0-5.0(RES)	TIN	3.14 mg/Kg	3.14U mg/Kg

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P13026AB221410A	5/11/2011 2:10:00 PM	COPPER VANADIUM	0.0687 mg/Kg 0.0726 mg/Kg	DUP08-SA8N-QC-050911 SL-078-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-9.0-10.0 SL-088-SA8N-SB-3.0-4.0 SL-135-SA8N-SB-2.0-3.0 SL-141-SA8N-SB-4.0-5.0

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB51B210326A	5/11/2011 3:26:00 AM	METHYLENE CHLORIDE TOLUENE	0.92 ug/Kg 0.09 ug/Kg	DUP08-SA8N-QC-050911 SL-078-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-9.0-10.0 SL-088-SA8N-SB-3.0-4.0 SL-135-SA8N-SB-2.0-3.0 SL-141-SA8N-SB-4.0-5.0

Method Blank Outlier Report

Lab Reporting Batch ID: DE146 **Laboratory: LL**

EDD Filename: DE146_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP08-SA8N-QC-050911(RES)	TOLUENE	0.08 ug/Kg	4.2U ug/Kg
SL-087-SA8N-SB-9.0-10.0(RES)	TOLUENE	0.1 ug/Kg	3.8U ug/Kg
SL-135-SA8N-SB-2.0-3.0(RES)	TOLUENE	0.09 ug/Kg	4.4U ug/Kg
SL-141-SA8N-SB-4.0-5.0(RES)	TOLUENE	0.09 ug/Kg	4.5U ug/Kg

Method: **8270C SIM**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKLA13B261600	5/18/2011 4:00:00 PM	Di-n-octylphthalate	6.4 ug/Kg	DUP08-SA8N-QC-050911 SL-078-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-9.0-10.0 SL-088-SA8N-SB-3.0-4.0 SL-135-SA8N-SB-2.0-3.0 SL-141-SA8N-SB-4.0-5.0

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE146 **Laboratory: LL**

EDD Filename: DE146_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-141-SA8N-SB-4.0-5.0MS SL-141-SA8N-SB-4.0-5.0MSD (SL-141-SA8N-SB-4.0-5.0)	DIETHYLENE GLYCOL ETHYLENE GLYCOL Propylene glycol	40 55 62	50 - -	59.00-109.00 63.00-107.00 63.00-107.00	23 (20.00) - -	DIETHYLENE GLYCOL ETHYLENE GLYCOL Propylene glycol	J (all detects) UJ (all non-detects)
SL-141-SA8N-SB-4.0-5.0MS (SL-141-SA8N-SB-4.0-5.0)	GASOLINE RANGE ORGANICS (	123	-	39.00-118.00	-	GASOLINE RANGE ORGANICS	J(all detects)

Method: 8330A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-141-SA8N-SB-4.0-5.0MSD (SL-141-SA8N-SB-4.0-5.0)	1,3,5-TRINITROBENZENE	-	68	82.00-126.00	-	1,3,5-TRINITROBENZENE	J(all detects) UJ(all non-detects)
	2,4,6-TRINITROTOLUENE	-	78	82.00-130.00	-	2,4,6-TRINITROTOLUENE	
	2,4-DINITROTOLUENE	-	76	80.00-131.00	-	2,4-DINITROTOLUENE	
	2,6-DINITROTOLUENE	-	77	80.00-127.00	-	2,6-DINITROTOLUENE	
	2-AMINO-4,6-DINITROTOLUENE	-	76	80.00-137.00	-	2-AMINO-4,6-DINITROTOLUEN	
	2-NITROTOLUENE	-	79	80.00-122.00	-	2-NITROTOLUENE	
	4-AMINO-2,6-DINITROTOLUENE	-	77	80.00-127.00	-	4-AMINO-2,6-DINITROTOLUEN	
	4-NITROTOLUENE	-	78	80.00-125.00	-	4-NITROTOLUENE	
	HMX	-	59	63.00-128.00	-	HMX	
	Nitroglycerin	-	71	80.00-120.00	-	Nitroglycerin	
	RDX	-	62	75.00-129.00	-	RDX	

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-141-SA8N-SB-4.0-5.0MS (DUP08-SA8N-QC-050911 SL-078-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-9.0-10.0 SL-088-SA8N-SB-3.0-4.0 SL-135-SA8N-SB-2.0-3.0 SL-141-SA8N-SB-4.0-5.0)	VANADIUM	132	-	75.00-125.00	-	VANADIUM	No Qual, >4x
SL-141-SA8N-SB-4.0-5.0MS SL-141-SA8N-SB-4.0-5.0MSD (DUP08-SA8N-QC-050911 SL-078-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-9.0-10.0 SL-088-SA8N-SB-3.0-4.0 SL-135-SA8N-SB-2.0-3.0 SL-141-SA8N-SB-4.0-5.0)	ANTIMONY CHROMIUM	40 72	37 60	75.00-125.00 75.00-125.00	- -	ANTIMONY CHROMIUM	J(all detects) UJ(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE146 **Laboratory: LL**

EDD Filename: DE146_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-141-SA8N-SB-4.0-5.0MS SL-141-SA8N-SB-4.0-5.0MSD (DUP08-SA8N-QC-050911 SL-078-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-9.0-10.0 SL-088-SA8N-SB-3.0-4.0 SL-135-SA8N-SB-2.0-3.0 SL-141-SA8N-SB-4.0-5.0)	ALUMINUM IRON MAGNESIUM MANGANESE POTASSIUM TITANIUM	3500 2532 446 - 198 471	3175 1106 393 147 177 431	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - - - -	ALUMINUM IRON MAGNESIUM MANGANESE POTASSIUM TITANIUM	No Qual, >4x
SL-141-SA8N-SB-4.0-5.0MS SL-141-SA8N-SB-4.0-5.0MSD (DUP08-SA8N-QC-050911 SL-078-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-9.0-10.0 SL-088-SA8N-SB-3.0-4.0 SL-135-SA8N-SB-2.0-3.0 SL-141-SA8N-SB-4.0-5.0)	CALCIUM	-421	2935	75.00-125.00	43 (20.00)	CALCIUM	J(all detects) UJ(all non-detects) No Qual based on %R, >4x
SL-141-SA8N-SB-4.0-5.0MSD (DUP08-SA8N-QC-050911 SL-078-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-9.0-10.0 SL-088-SA8N-SB-3.0-4.0 SL-135-SA8N-SB-2.0-3.0 SL-141-SA8N-SB-4.0-5.0)	PHOSPHORUS	-	73	75.00-125.00	-	PHOSPHORUS	No Qual, >4x

Method: 1625C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-141-SA8N-SB-4.0-5.0MSD (SL-141-SA8N-SB-4.0-5.0)	N-NITROSODIMETHYLAMINE	-	69	70.00-130.00	-	N-NITROSODIMETHYLAMINE	No Qual Diluted Out

Method: 8270C SIM
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-141-SA8N-SB-4.0-5.0MSD (SL-141-SA8N-SB-4.0-5.0)	1-METHYLNAPHTHALENE 2-METHYLNAPHTHALENE	- -	67 48	72.00-123.00 64.00-103.00	35 (30.00) 58 (30.00)	1-METHYLNAPHTHALENE 2-METHYLNAPHTHALENE	J(all detects) UJ(all non-detects)

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-141-SA8N-SB-4.0-5.0MSD (SL-141-SA8N-SB-4.0-5.0)	2-METHYLPHENOL	-	113	75.00-111.00	-	2-METHYLPHENOL	J(all detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE146 **Laboratory: LL**

EDD Filename: DE146_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-141-SA8N-SB-4.0-5.0MS SL-141-SA8N-SB-4.0-5.0MSD (SL-141-SA8N-SB-4.0-5.0)	2,4-DINITROPHENOL	16	17	20.00-143.00	-	2,4-DINITROPHENOL	J(all detects) UJ(all non-detects)

Method: 300.0
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-141-SA8N-SB-4.0-5.0MS (DUP08-SA8N-QC-050911 SL-078-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-9.0-10.0 SL-088-SA8N-SB-3.0-4.0 SL-135-SA8N-SB-2.0-3.0 SL-141-SA8N-SB-4.0-5.0)	FLUORIDE	61	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)

Method: 8260B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-141-SA8N-SB-4.0-5.0MSD (SL-141-SA8N-SB-4.0-5.0)	TRICHLOROETHENE	-	-	53.00-144.00	50 (30.00)	TRICHLOROETHENE	J(all detects)
SL-141-SA8N-SB-4.0-5.0MS SL-141-SA8N-SB-4.0-5.0MSD (SL-141-SA8N-SB-4.0-5.0)	METHYLENE CHLORIDE	156	37	61.00-141.00	44 (30.00)	METHYLENE CHLORIDE	J(all detects) UJ(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE146 **Laboratory: LL**

EDD Filename: DE146_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	*Analyte*	*Sample RPD*	*eQAPP RPD*	*Flag*
SL-141-SA8N-SB-4.0-5.0DUP (DUP08-SA8N-QC-050911 SL-078-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-9.0-10.0 SL-088-SA8N-SB-3.0-4.0 SL-135-SA8N-SB-2.0-3.0 SL-141-SA8N-SB-4.0-5.0)	FLUORIDE	23	20.00	No Qual, OK by difference

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	*Analyte*	*Sample RPD*	*eQAPP RPD*	*Flag*
SL-141-SA8N-SB-4.0-5.0DUP (DUP08-SA8N-QC-050911 SL-078-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-9.0-10.0 SL-088-SA8N-SB-3.0-4.0 SL-135-SA8N-SB-2.0-3.0 SL-141-SA8N-SB-4.0-5.0)	ANTIMONY	47	20.00	J(all detects) UJ(all non-detects) Sb, Cd, Ag, Tl No Qual, OK by difference
	ARSENIC	36	20.00	
	BARIUM	33	20.00	
	BERYLLIUM	34	20.00	
	CADMIUM	73	20.00	
	CHROMIUM	28	20.00	
	COBALT	28	20.00	
	COPPER	31	20.00	
	LEAD	28	20.00	
	NICKEL	34	20.00	
	SILVER	43	20.00	
	THALLIUM	28	20.00	
	VANADIUM	35	20.00	
	ZINC	24	20.00	

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE146 **Laboratory: LL**

EDD Filename: DE146_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8330A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11372AQ240134A (DUP08-SA8N-QC-050911 SL-078-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-9.0-10.0 SL-088-SA8N-SB-3.0-4.0 SL-135-SA8N-SB-2.0-3.0 SL-141-SA8N-SB-4.0-5.0)	PETN	121	-	80.00-120.00	-	PETN	J (all detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P13026AQ221413A (DUP08-SA8N-QC-050911 SL-078-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-9.0-10.0 SL-088-SA8N-SB-3.0-4.0 SL-135-SA8N-SB-2.0-3.0 SL-141-SA8N-SB-4.0-5.0)	ANTIMONY	156	-	80.00-120.00	-	ANTIMONY	No Qual, SRM within QC limits

Method: 8260B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCSB51Q210349A LCSB51Y210413A (DUP08-SA8N-QC-050911 SL-078-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-4.0-5.0 SL-087-SA8N-SB-9.0-10.0 SL-088-SA8N-SB-3.0-4.0 SL-135-SA8N-SB-2.0-3.0 SL-141-SA8N-SB-4.0-5.0)	BROMOCHLOROMETHANE	128	128	79.00-124.00	-	BROMOCHLOROMETHANE	J(all detects)

Surrogate Outlier Report

Lab Reporting Batch ID: DE146 **Laboratory: LL**

EDD Filename: DE146_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1625C**
Matrix: **SO**

Sample ID	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
DUP08-SA8N-QC-050911	N-Nitrosodimethylamine-d6	217	50.00-150.00	All Target Analytes	J (all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DE146 **Laboratory: LL**

EDD Filename: DE146_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-141-SA8N-SB-4.0-5.0	DUP08-SA8N-QC-050911			
MOISTURE	16.8	15.2	10		No Qualifiers Applied

Method: 1625C
Matrix: SO

Analyte	Concentration (ng/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-141-SA8N-SB-4.0-5.0	DUP08-SA8N-QC-050911			
N-NITROSODIMETHYLAMINE	401 U	23.5	200	50.00	J(all detects) UJ(all non-detects)

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-141-SA8N-SB-4.0-5.0	DUP08-SA8N-QC-050911			
FLUORIDE	3.5	1.9	59	50.00	J(all detects)
Nitrate-NO3	2.0	9.8	132	50.00	

Method: 6010B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-141-SA8N-SB-4.0-5.0	DUP08-SA8N-QC-050911			
ALUMINUM	22300	23200	4	50.00	
BORON	7.50	8.47	12	50.00	
CALCIUM	30800	26500	15	50.00	
IRON	30800	31500	2	50.00	
LITHIUM	32.1	33.3	4	50.00	
MAGNESIUM	7970	7900	1	50.00	
MANGANESE	362	379	5	50.00	No Qualifiers Applied
PHOSPHORUS	647	639	1	50.00	
POTASSIUM	5720	6140	7	50.00	
SODIUM	303	265	13	50.00	
STRONTIUM	58.4	59.8	2	50.00	
TIN	3.14	2.95	6	50.00	
TITANIUM	1350	1440	6	50.00	
Zirconium	5.89	6.58	11	50.00	

Field Duplicate RPD Report

Lab Reporting Batch ID: DE146 **Laboratory: LL**

EDD Filename: DE146_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-141-SA8N-SB-4.0-5.0	DUP08-SA8N-QC-050911			
ANTIMONY	0.236	0.323	31	50.00	No Qualifiers Applied
ARSENIC	6.00	6.87	14	50.00	
BARIUM	92.9	113	20	50.00	
BERYLLIUM	0.594	0.716	19	50.00	
CADMIUM	0.162	0.147	10	50.00	
CHROMIUM	27.7	33.1	18	50.00	
COBALT	9.29	11.2	19	50.00	
COPPER	14.7	17.4	17	50.00	
LEAD	7.39	9.52	25	50.00	
MOLYBDENUM	0.398	0.424	6	50.00	
NICKEL	16.9	19.5	14	50.00	
SELENIUM	0.289	0.282	2	50.00	
SILVER	0.0290	0.0342	16	50.00	
THALLIUM	0.281	0.364	26	50.00	
VANADIUM	62.3	75.2	19	50.00	
ZINC	69.4	78.9	13	50.00	

Method: 8015M
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-141-SA8N-SB-4.0-5.0	DUP08-SA8N-QC-050911			
EFH (C30-C40)	0.85	0.77	10	50.00	No Qualifiers Applied

Method: 8260B
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-141-SA8N-SB-4.0-5.0	DUP08-SA8N-QC-050911			
METHYLENE CHLORIDE	30	20	40	50.00	No Qualifiers Applied
TOLUENE	0.09	0.08	12	50.00	
ACETONE	9.1 U	9.5	200	50.00	J(all detects) UJ(all non-detects)
CHLOROFORM	0.16	4.2 U	200	50.00	
TRICHLOROETHENE	17	6.3	92	50.00	

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-141-SA8N-SB-4.0-5.0	DUP08-SA8N-QC-050911			
NAPHTHALENE	2.0 U	0.91	200	50.00	J(all detects) UJ(all non-detects)

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-141-SA8N-SB-4.0-5.0	DUP08-SA8N-QC-050911			
PH	8.05	7.91	2	50.00	No Qualifiers Applied

Field Duplicate RPD Report

Lab Reporting Batch ID: DE146 **Laboratory: LL**

EDD Filename: DE146_v1 **eQAPP Name: CDM_SSFL_110509**

Method: ASTM D1498
Matrix: SO

Analyte	*Concentration (mV)*		*Sample RPD*	*eQAPP RPD*	*Flag*
	SL-141-SA8N-SB-4.0-5.0	DUP08-SA8N-QC-050911			
Oxidation Reduction Potential	511	497	3		No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: DE146 **Laboratory: LL**

EDD Filename: DE146_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1625C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP08-SA8N-QC-050911	N-NITROSODIMETHYLAMINE	J	23.5	39.3	PQL	ng/Kg	J (all detects)
SL-087-SA8N-SB-4.0-5.0	N-NITROSODIMETHYLAMINE	J	22.2	38.5	PQL	ng/Kg	J (all detects)

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-078-SA8N-SB-4.0-5.0	Nitrate-NO3	J	1.3	1.7	PQL	mg/Kg	J (all detects)
SL-087-SA8N-SB-9.0-10.0	Nitrate-NO3	J	1.5	1.8	PQL	mg/Kg	J (all detects)
SL-088-SA8N-SB-3.0-4.0	Nitrate-NO3	J	1.2	1.7	PQL	mg/Kg	J (all detects)

Method: 314.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-078-SA8N-SB-4.0-5.0	PERCHLORATE	J	17.3	34.0	PQL	ug/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP08-SA8N-QC-050911	TIN	J	2.95	11.3	PQL	mg/Kg	J (all detects)
SL-078-SA8N-SB-4.0-5.0	BORON	J	4.02	5.61	PQL	mg/Kg	J (all detects)
	TIN	J	3.16	11.2	PQL	mg/Kg	
	Zirconium	J	5.16	5.61	PQL	mg/Kg	
SL-087-SA8N-SB-4.0-5.0	BORON	J	2.27	5.61	PQL	mg/Kg	J (all detects)
	TIN	J	3.12	11.2	PQL	mg/Kg	
	Zirconium	J	5.14	5.61	PQL	mg/Kg	
SL-087-SA8N-SB-9.0-10.0	BORON	J	1.49	5.90	PQL	mg/Kg	J (all detects)
	TIN	J	3.06	11.8	PQL	mg/Kg	
SL-088-SA8N-SB-3.0-4.0	BORON	J	1.78	5.62	PQL	mg/Kg	J (all detects)
	SODIUM	J	91.0	112	PQL	mg/Kg	
	TIN	J	3.00	11.2	PQL	mg/Kg	
	Zirconium	J	2.14	5.62	PQL	mg/Kg	
SL-135-SA8N-SB-2.0-3.0	SODIUM	J	78.7	110	PQL	mg/Kg	J (all detects)
	TIN	J	3.09	11.0	PQL	mg/Kg	
	Zirconium	J	3.29	5.48	PQL	mg/Kg	
SL-141-SA8N-SB-4.0-5.0	TIN	J	3.14	11.9	PQL	mg/Kg	J (all detects)
	Zirconium	J	5.89	5.95	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE146 **Laboratory: LL**

EDD Filename: DE146_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP08-SA8N-QC-050911	SELENIUM	J	0.282	0.462	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0342	0.116	PQL	mg/Kg	
SL-078-SA8N-SB-4.0-5.0	ANTIMONY	J	0.206	0.222	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.0500	0.111	PQL	mg/Kg	
	SELENIUM	J	0.132	0.445	PQL	mg/Kg	
	SILVER	J	0.0734	0.111	PQL	mg/Kg	
SL-087-SA8N-SB-4.0-5.0	ANTIMONY	J	0.184	0.226	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.141	0.453	PQL	mg/Kg	
	SILVER	J	0.0363	0.113	PQL	mg/Kg	
SL-087-SA8N-SB-9.0-10.0	ANTIMONY	J	0.212	0.229	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.0908	0.114	PQL	mg/Kg	
	SELENIUM	J	0.107	0.458	PQL	mg/Kg	
	SILVER	J	0.0538	0.114	PQL	mg/Kg	
SL-088-SA8N-SB-3.0-4.0	SELENIUM	J	0.342	0.449	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0304	0.112	PQL	mg/Kg	
SL-135-SA8N-SB-2.0-3.0	ANTIMONY	J	0.100	0.219	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.135	0.438	PQL	mg/Kg	
SL-141-SA8N-SB-4.0-5.0	SELENIUM	J	0.289	0.471	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0290	0.118	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-087-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.36	1.2	PQL	mg/Kg	J (all detects)
SL-087-SA8N-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.34	1.2	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-087-SA8N-SB-4.0-5.0	MERCURY	J	0.0042	0.109	PQL	mg/Kg	J (all detects)
SL-088-SA8N-SB-3.0-4.0	MERCURY	J	0.0056	0.113	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP08-SA8N-QC-050911	EFH (C30-C40)	J	0.77	1.4	PQL	mg/Kg	J (all detects)
SL-087-SA8N-SB-4.0-5.0	EFH (C30-C40)	J	0.83	1.4	PQL	mg/Kg	J (all detects)
SL-088-SA8N-SB-3.0-4.0	EFH (C30-C40)	J	0.60	1.4	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE146 **Laboratory: LL**

EDD Filename: DE146_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-141-SA8N-SB-4.0-5.0	EFH (C30-C40)	J	0.85	1.4	PQL	mg/Kg	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-135-SA8N-SB-2.0-3.0	Aroclor 5460	J	1.5	3.6	PQL	ug/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP08-SA8N-QC-050911	TOLUENE	J	0.08	4.2	PQL	ug/Kg	J (all detects)
SL-087-SA8N-SB-9.0-10.0	TOLUENE	J	0.1	3.8	PQL	ug/Kg	J (all detects)
SL-135-SA8N-SB-2.0-3.0	CHLOROFORM TOLUENE	J J	0.14 0.09	4.4 4.4	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-141-SA8N-SB-4.0-5.0	CHLOROFORM TOLUENE	J J	0.16 0.09	4.5 4.5	PQL PQL	ug/Kg ug/Kg	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP08-SA8N-QC-050911	NAPHTHALENE	J	0.91	1.9	PQL	ug/Kg	J (all detects)
SL-088-SA8N-SB-3.0-4.0	2-METHYLNAPHTHALENE NAPHTHALENE	J J	0.83 1.1	1.9 1.9	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-135-SA8N-SB-2.0-3.0	BENZO(B)FLUORANTHENE BIS(2-ETHYLHEXYL)PHTHALATE NAPHTHALENE	J J J	1.2 6.7 1.2	1.8 20 1.8	PQL PQL PQL	ug/Kg ug/Kg ug/Kg	J (all detects)

LDC #: 26275I4 **VALIDATION COMPLETENESS WORKSHEET** Date: 8/29/11
SDG #: DE146 ADR Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer:
2nd Reviewer:

METHOD: Metals (EPA SW 846 Method 6010B/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 5/9/11
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	A	Not found in MB/ICB/CCB
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	SW	Be, Ca, Fe, Mg, Mn, P, K, Ti, V, >4X, Ni not for RPD out.
VII.	Duplicate Sample Analysis	SW	Sb, Cd, Ag, Tl <5X
VIII.	Laboratory Control Samples (LCS)	N A	Sb
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	Ba, Cr, Co, Cu, Pb, Ni, V, Zn
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	SL-078-SA8N-SB-4.0-5.0	11		21		31	
2	SL-087-SA8N-SB-4.0-5.0	12		22		32	
3	SL-087-SA8N-SB-9.0-10.0	13		23		33	
4	SL-088-SA8N-SB-3.0-4.0	14		24		34	
5	SL-135-SA8N-SB-2.0-3.0	15		25		35	
6	SL-141-SA8N-SB-4.0-5.0	16		26		36	
7	DUP08-SA8N-QC-050911	17		27		37	
8	SL-141-SA8N-SB-4.0-5.0MS	18		28		38	
9	SL-141-SA8N-SB-4.0-5.0MSD	19		29		39	
10	SL-141-SA8N-SB-4.0-5.0DUP	20		30		40	

Notes:

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QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: DE146
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6281100BKG Matrix Spike Lab Sample ID: 6281101MS Matrix Spike Duplicate Lab Sample ID: 6281102MSD
% Solids for Sample: 83.2
Batch Id(s): P13008B, P13026A, P13011A

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	RPD	M
Aluminum		22272.1642		30519.7622		29753.8579		235.6712	235.6712	MG/KG	3500		3175		3			20	P
Antimony	121	0.2361		0.7954		0.7548		1.4140	1.4003	MG/KG	40	N	37	N	5		75 - 125	20	MS
Arsenic	75	5.9978		8.0717		8.6772		2.3567	2.3338	MG/KG	88		115		7		75 - 125	20	MS
Barium	137	92.9252		103.6246		105.7459		11.7836	11.6692	MG/KG	91		110		2			20	MS
Beryllium	9	0.5941		1.4086		1.3487		0.9427	0.9335	MG/KG	86		81		4		75 - 125	20	MS
Boron		7.5007		247.8342		247.1566		235.6712	235.6712	MG/KG	102		102		0		84 - 115	20	P
Cadmium	111	0.1618		1.2161		1.2547		1.1784	1.1669	MG/KG	89		94		3		75 - 125	20	MS
Calcium		30820.6505		28835.7336		44655.2508		471.3424	471.3424	MG/KG	-421		2935		43	*		20	P
Chromium	52	27.6914		36.1991		34.6574		11.7836	11.6692	MG/KG	72	N	60	N	4		75 - 125	20	MS
Cobalt	59	9.2949		68.6039		66.1875		58.9178	58.3458	MG/KG	101		98		4		75 - 125	20	MS
Copper	63	14.6776		25.4525		25.5788		11.7836	11.6692	MG/KG	91		93		0		75 - 125	20	MS
Iron		30753.8604		33737.0558		32057.6275		117.8356	117.8356	MG/KG	2532		1106		5			20	P
Lead	208	7.3859		11.4324		11.4684		3.5351	3.5007	MG/KG	114		117		0		75 - 125	20	MS
Lithium		32.0509		157.9680		157.2563		117.8356	117.8356	MG/KG	107		106		0		82 - 114	20	P
Magnesium		7974.7906		9026.0546		8901.9231		235.6712	235.6712	MG/KG	446		393		1			20	P
Manganese		362.2965		431.2559		449.1174		58.9178	58.9178	MG/KG	117		147		4			20	P
Mercury		0.0035	U	0.1862		0.1872		0.1991	0.1956	MG/KG	94		96		1		65 - 135	20	CV
Molybdenum	98	0.3980		11.1520		10.6913		11.7836	11.6692	MG/KG	91		88		4		75 - 125	20	MS
Nickel	60	16.8858		28.3984		28.1460		11.7836	11.6692	MG/KG	98		96		1		75 - 125	20	MS
Phosphorus		646.8250		748.3656		732.3070		117.8356	117.8356	MG/KG	86		73		2			20	P
Potassium		5715.0847		8048.1299		7799.1516		1178.3560	1178.3560	MG/KG	198		177		3			20	P
Selenium	78	0.2889	B	2.3803		2.3712		2.3567	2.3338	MG/KG	89		89		0		75 - 125	20	MS
Silver	107	0.0290	B	11.1567		10.9247		11.7836	11.6692	MG/KG	94		93		2		75 - 125	20	MS
Sodium		303.2809		1546.6004		1552.5900		1178.3560	1178.3560	MG/KG	106		106		0		75 - 125	20	P
Strontium		58.3968		178.8756		200.2274		117.8356	117.8356	MG/KG	102		120	N	11		75 - 115	20	P
Thallium	203	0.2809		0.7457		0.7053		0.4713	0.4668	MG/KG	99		91		6		75 - 125	20	MS
Tin		3.1417	B	415.2998		418.6369		471.3424	471.3424	MG/KG	87		88		1		80 - 110	20	P
Titanium		1353.2131		1907.6522		1861.1661		117.8356	117.8356	MG/KG	471		431		2			20	P
Vanadium	51	62.3350		77.9129		74.7760		11.7836	11.6692	MG/KG	132		107		4			20	MS
Zinc	66	69.4052		79.4448		78.1833		11.7836	11.6692	MG/KG	85		75		2			20	MS
Zirconium		5.8930	B	105.5230		105.8623		117.8356	117.8356	MG/KG	85		85		0		75 - 125	20	P

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

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QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: DE146
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6281100BKG
% Solids for Duplicate: 84.2
Batch ID(s): P13008B, P13026A, P13011A
Concentration Units: MG/KG

Duplicate Lab Sample ID: 6281103DUP
% Solids for Sample: 83.2

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			22272.1642		23121.9497		4		P
Antimony	121	0.2	0.2361		0.3801		47		MS
Arsenic	75		5.9978		8.6181		36	*	MS
Barium	137		92.9252		129.0223		33	*	MS
Beryllium	9		0.5941		0.8352		34	*	MS
Boron		6.0	7.5007		9.1626		20		P
Cadmium	111	0.1	0.1618		0.3463		73	*	MS
Calcium			30820.6505		31585.3214		2		P
Chromium	52		27.6914		36.8907		28	*	MS
Cobalt	59		9.2949		12.3096		28	*	MS
Copper	63		14.6776		19.9614		31	*	MS
Iron			30753.8604		31350.4341		2		P
Lead	208		7.3859		9.7915		28	*	MS
Lithium			32.0509		32.5756		2		P
Magnesium			7974.7906		8085.5151		1		P
Manganese			362.2965		395.9800		9		P
Mercury			0.0035	U	0.0035	U			CV
Molybdenum	98	0.1	0.3980		0.4296		8		MS
Nickel	60		16.8858		23.6934		34	*	MS
Phosphorus			646.8250		638.4090		1		P
Potassium			5715.0847		5910.1393		3		P
Selenium	78		0.2889	B	0.3380	B	16		MS
Silver	107		0.0290	B	0.0187	B	43		MS
Sodium		119.0	303.2809		316.1945		4		P
Strontium			58.3968		64.0275		9		P
Thallium	203	0.1	0.2809		0.3734		28		MS
Tin			3.1417	B	3.2405	B	3		P
Titanium			1353.2131		1405.2756		4		P
Vanadium	51		62.3350		88.8947		35	*	MS
Zinc	66		69.4052		87.8951		24	*	MS
Zirconium		6.0	5.8930	B	6.7028		13		P

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	FLAGS:
AF = Cold Vapor Atomic Fluorescence	* = Duplicate Out of Spec

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QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: DE146
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6281100BKG Serial Dilution Lab Sample ID: 6281100L
Batch ID(s): P13008B, P13026A
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		187157.4500		190601.4500		2		P
Antimony	121	1.0020		1.5000	U	100		MS
Arsenic	75	25.4500		29.2800		15		MS
Barium	137	394.3000		481.6000		22	E	MS
Beryllium	9	2.5210		3.6570		45		MS
Boron		63.0300		57.4500	B	9		P
Cadmium	111	0.6864		1.0000	U	100		MS
Calcium		258992.0900		263014.0500		2		P
Chromium	52	117.5000		151.7000		29	E	MS
Cobalt	59	39.4400		53.4000		35	E	MS
Copper	63	62.2800		78.4500		26	E	MS
Iron		258430.8400		256026.1500		1		P
Lead	208	31.3400		40.2500		28	E	MS
Lithium		269.3300		276.9000		3		P
Magnesium		67013.7600		70145.5500		5		P
Manganese		3044.4500		3245.8500		7		P
Molybdenum	98	1.6890		2.3535	B	39		MS
Nickel	60	71.6500		89.2000		24	E	MS
Phosphorus		5435.4000		5432.9500		0		P
Potassium		48025.0000		48867.8500		2		P
Selenium	78	1.2260	B	2.3495	B	92		MS
Silver	107	0.1230	B	0.3000	U	100		MS
Sodium		2548.5300		2395.9000	B	6		P
Strontium		490.7200		503.1500		3		P
Thallium	203	1.1920		1.7165	B	44		MS
Tin		26.4000	B	50.0000	U	100		P
Titanium		11371.3200		11709.0000		3		P
Vanadium	51	264.5000		333.8000		26	E	MS
Zinc	66	294.5000		417.1000		42	E	MS
Zirconium		49.5200	B	57.5500	B	16		P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS: DE146 3268
U= Below MDL
B= Below LOQ

FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

SAMPLE DELIVERY GROUP

DE147

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
29-Sep-2011	SL-007-SA8S-SS-0.0-0.5	6423878	N	METHOD	1613B	IV
29-Sep-2011	SL-005-SA8S-SS-0.0-0.5	6423877	N	METHOD	1613B	IV
29-Sep-2011	SL-177-SA7-SB-3.0-4.0	6423886	N	METHOD	1613B	IV
29-Sep-2011	SL-003-SA8S-SS-0.0-0.5	6423874	N	METHOD	1613B	IV
29-Sep-2011	SL-003-SA8S-SS-0.0-0.5MS	6423875	MS	METHOD	1613B	IV
29-Sep-2011	SL-003-SA8S-SS-0.0-0.5MSD	6423876	MSD	METHOD	1613B	IV
29-Sep-2011	SL-127-SA7-SB-4.0-5.0	6423885	N	METHOD	1613B	IV
29-Sep-2011	DUP01-SA8S-QC-092911	6423883	FD	METHOD	1613B	IV
29-Sep-2011	SL-001-SA8S-SS-0.0-0.5	6423873	N	METHOD	1613B	IV
29-Sep-2011	SL-126-SA7-SB-4.0-5.0	6423884	N	METHOD	1613B	IV
29-Sep-2011	SL-024-SA8S-SS-0.0-0.5	6423882	N	METHOD	1613B	IV
29-Sep-2011	SL-013-SA8S-SS-0.0-0.5	6423879	N	METHOD	1613B	IV
29-Sep-2011	SL-014-SA8S-SS-0.0-0.5	6423880	N	METHOD	1613B	IV
29-Sep-2011	SL-015-SA8S-SS-0.0-0.5	6423881	N	METHOD	1613B	IV
06-Oct-2011	SL-229-SA6-SS-0.0-0.5	6431147	N	METHOD	1613B	IV
06-Oct-2011	SL-229-SA6-SB-2.0-3.0	6431152	N	METHOD	1613B	IV
06-Oct-2011	SL-230-SA6-SS-0.0-0.5	6431148	N	METHOD	1613B	IV
06-Oct-2011	SL-230-SA6-SB-4.0-5.0	6431153	N	METHOD	1613B	IV
06-Oct-2011	SL-254-SA6-SB-2.5-3.5	6431154	N	METHOD	1613B	IV
06-Oct-2011	SL-234-SA6-SS-0.0-0.5	6431149	N	METHOD	1613B	IV
06-Oct-2011	SL-232-SA6-SS-0.0-0.5	6431150	N	METHOD	1613B	IV
06-Oct-2011	SL-232-SA6-SB-2.5-3.5	6431151	N	METHOD	1613B	IV

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DX147 Laboratory: LL

EDD Filename: DX147_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: DUP01-SA8S-QC-092911 *Collected:* 9/29/2011 10:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	3.04	JB	0.0303	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.615	JBQ	0.0183	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0624	JBQ	0.0245	MDL	5.15	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0704	JQ	0.0271	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.361	J	0.0281	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.193	JB	0.0260	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.148	JB	0.0233	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.138	JB	0.0256	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0609	JB	0.0205	MDL	5.15	PQL	ng/Kg	UJ	B, FD
1,2,3,7,8-PECDD	0.0846	JQ	0.0258	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0763	JB	0.0215	MDL	5.15	PQL	ng/Kg	UJ	B, FD
2,3,4,6,7,8-HXCDF	0.149	JB	0.0186	MDL	5.15	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.233	JB	0.0220	MDL	5.15	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.265	JB	0.0349	MDL	1.03	PQL	ng/Kg	J	Z
OCDF	1.00	JB	0.0284	MDL	10.3	PQL	ng/Kg	J	Z

Sample ID: SL-001-SA8S-SS-0.0-0.5 *Collected:* 9/29/2011 11:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.77	JB	0.0590	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.592	JB	0.0323	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.118	JBQ	0.0499	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0733	J	0.0329	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.288	JQ	0.0388	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.152	JB	0.0326	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.133	JBQ	0.0311	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.125	JB	0.0347	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0547	JBQ	0.0320	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0599	J	0.0362	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0941	JBQ	0.0250	MDL	5.28	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.203	JB	0.0242	MDL	5.28	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.381	JB	0.0263	MDL	5.28	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.179	JB	0.0436	MDL	1.06	PQL	ng/Kg	U	B
OCDF	1.15	JB	0.0920	MDL	10.6	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: SL-003-SA8S-SS-0.0-0.5 ***Collected:*** 9/29/2011 9:55:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.71	JB	0.0405	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.574	JB	0.0211	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0457	JB	0.0282	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0692	JQ	0.0320	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.220	J	0.0352	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.165	JB	0.0345	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.113	JBQ	0.0268	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.163	JBQ	0.0290	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0252	U	0.0252	MDL	5.09	PQL	ng/Kg	UJ	FD
1,2,3,7,8-PECDD	0.0765	J	0.0313	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0217	U	0.0217	MDL	5.09	PQL	ng/Kg	UJ	FD
2,3,4,6,7,8-HXCDF	0.150	JB	0.0209	MDL	5.09	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.317	JB	0.0220	MDL	5.09	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.196	JB	0.0375	MDL	1.02	PQL	ng/Kg	J	Z
OCDF	0.882	JB	0.0464	MDL	10.2	PQL	ng/Kg	U	B

Sample ID: SL-005-SA8S-SS-0.0-0.5 ***Collected:*** 9/29/2011 8:40:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.781	JB	0.0297	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.151	JB	0.0191	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0559	JB	0.0189	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0315	J	0.0252	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.0398	JQ	0.0348	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.0811	JBQ	0.0273	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0340	JB	0.0326	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0560	JB	0.0238	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0374	JBQ	0.0192	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0587	JQ	0.0286	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0389	JB	0.0198	MDL	5.09	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0512	JB	0.0162	MDL	5.09	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0720	JBQ	0.0189	MDL	5.09	PQL	ng/Kg	U	B
OCDD	5.28	JB	0.0248	MDL	10.2	PQL	ng/Kg	J	Z
OCDF	0.353	JB	0.0407	MDL	10.2	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **SVOA**

Method: **1613B** ***Matrix:*** **SO**

Sample ID: SL-007-SA8S-SS-0.0-0.5 ***Collected:*** 9/29/2011 8:00:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.29	JB	0.0341	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.474	JB	0.0190	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0508	JB	0.0211	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0397	JQ	0.0280	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.0598	JQ	0.0255	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.119	JB	0.0270	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0674	JB	0.0227	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.118	JBQ	0.0273	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0505	JBQ	0.0178	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0474	JQ	0.0270	MDL	5.14	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0823	JBQ	0.0153	MDL	5.14	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0428	JBQ	0.0171	MDL	5.14	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0545	JB	0.0312	MDL	1.03	PQL	ng/Kg	U	B
OCDF	0.884	JB	0.0379	MDL	10.3	PQL	ng/Kg	U	B

Sample ID: SL-013-SA8S-SS-0.0-0.5 ***Collected:*** 9/29/2011 2:55:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.17	JB	0.0342	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.756	JB	0.0242	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.211	JBQ	0.0263	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.224	J	0.0317	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.438	J	0.0445	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.253	JB	0.0310	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.372	JBQ	0.0382	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.289	JB	0.0323	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.222	JBQ	0.0314	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.188	J	0.0333	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.268	JBQ	0.0288	MDL	5.14	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.311	JB	0.0265	MDL	5.14	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.601	JB	0.0291	MDL	5.14	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.183	JB	0.0618	MDL	1.03	PQL	ng/Kg	U	B
OCDF	1.27	JB	0.0324	MDL	10.3	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DX147 Laboratory: LL

EDD Filename: DX147_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-014-SA8S-SS-0.0-0.5 *Collected:* 9/29/2011 3:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	0.690	JB	0.0225	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0761	JBQ	0.0259	MDL	5.20	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.194	J	0.0411	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.220	J	0.0344	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.247	JB	0.0443	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.172	JB	0.0266	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.210	JBQ	0.0377	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.164	J	0.0295	MDL	5.20	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.220	JB	0.0239	MDL	5.20	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.184	JB	0.0193	MDL	5.20	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.409	JB	0.0245	MDL	5.20	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0992	JB	0.0421	MDL	1.04	PQL	ng/Kg	U	B
OCDF	1.33	JB	0.0312	MDL	10.4	PQL	ng/Kg	J	Z

Sample ID: SL-015-SA8S-SS-0.0-0.5 *Collected:* 9/29/2011 3:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	5.08	JB	0.0435	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.862	JB	0.0254	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.108	JB	0.0244	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0940	JBQ	0.0360	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.189	JBQ	0.0463	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.169	JBQ	0.0345	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.129	JBQ	0.0412	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0999	JB	0.0333	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0687	JQ	0.0240	MDL	5.14	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0439	JB	0.0285	MDL	5.14	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0687	JB	0.0184	MDL	5.14	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.178	JB	0.0190	MDL	5.14	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.220	JBQ	0.0185	MDL	5.14	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0580	JQ	0.0372	MDL	1.03	PQL	ng/Kg	J	Z
OCDF	0.875	JB	0.0367	MDL	10.3	PQL	ng/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DX147 **Laboratory:** LL

EDD Filename: DX147_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-024-SA8S-SS-0.0-0.5 *Collected:* 9/29/2011 2:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	3.94	JB	0.0303	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.772	JB	0.0181	MDL	5.00	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0874	JBQ	0.0267	MDL	5.00	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.137	JBQ	0.0388	MDL	5.00	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.179	JBQ	0.0242	MDL	5.00	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.225	JB	0.0417	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.138	JB	0.0222	MDL	5.00	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.183	JBQ	0.0314	MDL	5.00	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0642	JQ	0.0265	MDL	5.00	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0493	JBQ	0.0288	MDL	5.00	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.190	JB	0.0273	MDL	5.00	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.190	JBQ	0.0224	MDL	5.00	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0436	JBQ	0.0256	MDL	5.00	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0482	JQ	0.0321	MDL	1.00	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.282	J	0.0531	MDL	1.00	PQL	ng/Kg	J	Z
OCDF	1.26	JB	0.0253	MDL	10.0	PQL	ng/Kg	U	B

Sample ID: SL-126-SA7-SB-4.0-5.0 *Collected:* 9/29/2011 11:33:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.211	JBQ	0.0217	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.0901	JBQ	0.0170	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0193	JB	0.0156	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.124	JB	0.0231	MDL	5.35	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.234	JB	0.0209	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.210	JBQ	0.0136	MDL	5.35	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0429	JB	0.0155	MDL	5.35	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0159	JB	0.0120	MDL	5.35	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0412	JB	0.0145	MDL	5.35	PQL	ng/Kg	U	B
OCDD	0.577	JB	0.0193	MDL	10.7	PQL	ng/Kg	U	B
OCDF	0.124	JBQ	0.0278	MDL	10.7	PQL	ng/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DX147 **Laboratory:** LL

EDD Filename: DX147_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-127-SA7-SB-4.0-5.0 *Collected:* 9/29/2011 10:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.284	JB	0.0175	MDL	5.11	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.163	JB	0.0112	MDL	5.11	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0235	JBQ	0.0114	MDL	5.11	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0219	J	0.0146	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.0346	JB	0.0158	MDL	5.11	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0482	JBQ	0.0180	MDL	5.11	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0636	JBQ	0.0146	MDL	5.11	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0500	JBQ	0.0119	MDL	5.11	PQL	ng/Kg	U	B
1,2,3,7,8-PECDD	0.0360	J	0.0167	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0254	JBQ	0.00973	MDL	5.11	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0396	JB	0.0104	MDL	5.11	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0610	JBQ	0.00952	MDL	5.11	PQL	ng/Kg	U	B
OCDD	0.862	JB	0.0149	MDL	10.2	PQL	ng/Kg	U	B
OCDF	0.230	JB	0.0225	MDL	10.2	PQL	ng/Kg	U	B

Sample ID: SL-177-SA7-SB-3.0-4.0 *Collected:* 9/29/2011 8:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.339	JB	0.0214	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.135	JBQ	0.0113	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0411	JBQ	0.0186	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.0413	JBQ	0.0161	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0551	JBQ	0.0204	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0191	JBQ	0.0139	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0930	JBQ	0.0202	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0556	JQ	0.0176	MDL	5.28	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0346	JBQ	0.0234	MDL	5.28	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0291	JBQ	0.0138	MDL	5.28	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0511	JBQ	0.0147	MDL	5.28	PQL	ng/Kg	U	B
2,3,7,8-TCDD	0.0319	JQ	0.0314	MDL	1.06	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.0344	JQ	0.0252	MDL	1.06	PQL	ng/Kg	J	Z
OCDD	1.15	JB	0.0208	MDL	10.6	PQL	ng/Kg	U	B
OCDF	0.179	JB	0.0316	MDL	10.6	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-229-SA6-SB-2.0-3.0 *Collected:* 10/6/2011 9:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	3.51	JB	0.0617	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	2.52	JB	0.0622	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.65	JB	0.0372	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	1.38	JB	0.0337	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	3.92	JB	0.0645	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.432	J	0.0407	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	1.03	JB	0.0556	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.714	JB	0.0280	MDL	5.18	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	2.20	JB	0.0354	MDL	5.18	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.834	JB	0.0280	MDL	5.18	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.224	J	0.0333	MDL	1.04	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.319	J	0.0443	MDL	1.04	PQL	ng/Kg	J	Z

Sample ID: SL-229-SA6-SS-0.0-0.5 *Collected:* 10/6/2011 8:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	2.79	JB	0.0599	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	1.87	J	0.0542	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.32	J	0.0740	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	1.06	JB	0.0629	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	2.84	JB	0.0511	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.254	JBQ	0.0378	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	2.23	J	0.0461	MDL	5.23	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.255	JBQ	0.0214	MDL	5.23	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	1.79	JB	0.0359	MDL	5.23	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.555	JB	0.0214	MDL	5.23	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.151	JBQ	0.0307	MDL	1.05	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.184	JBQ	0.0368	MDL	1.05	PQL	ng/Kg	U	B

Sample ID: SL-230-SA6-SB-4.0-5.0 *Collected:* 10/6/2011 10:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	3.22	JB	0.0287	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.398	JBQ	0.0497	MDL	5.18	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.206	JBQ	0.0591	MDL	5.18	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-230-SA6-SB-4.0-5.0 *Collected:* 10/6/2011 10:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8-HXCDF	0.336	JB	0.0404	MDL	5.18	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.544	JBQ	0.0581	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.234	JBQ	0.0346	MDL	5.18	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.226	JBQ	0.0605	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0487	JQ	0.0456	MDL	5.18	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0606	JBQ	0.0544	MDL	5.18	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.110	JBQ	0.0274	MDL	5.18	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.322	JB	0.0365	MDL	5.18	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0939	JBQ	0.0274	MDL	5.18	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0620	JQ	0.0441	MDL	1.04	PQL	ng/Kg	J	Z
OCDF	7.59	JB	0.0550	MDL	10.4	PQL	ng/Kg	J	Z

Sample ID: SL-230-SA6-SS-0.0-0.5 *Collected:* 10/6/2011 10:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	1.20	JB	0.0490	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.816	JB	0.0620	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.95	JB	0.0434	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	2.49	JB	0.0629	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	1.07	JB	0.0399	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.51	JB	0.0630	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.316	J	0.0474	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.427	JB	0.0702	MDL	5.34	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.45	JB	0.0473	MDL	5.34	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	1.09	JB	0.0433	MDL	5.34	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	1.35	JB	0.0449	MDL	5.34	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0733	J	0.0493	MDL	1.07	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.939	J	0.0847	MDL	1.07	PQL	ng/Kg	J	Z

Sample ID: SL-232-SA6-SB-2.5-3.5 *Collected:* 10/6/2011 3:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.308	JBQ	0.0206	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,4,6,7,8-HPCDF	0.175	JBQ	0.0145	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0271	JBQ	0.0270	MDL	5.37	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DX147 **Laboratory:** LL

EDD Filename: DX147_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-232-SA6-SB-2.5-3.5 *Collected:* 10/6/2011 3:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8-HxCDD	0.0832	JBQ	0.0237	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.106	JBQ	0.0177	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.0730	JB	0.0225	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDF	0.0607	JB	0.0146	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.0963	JB	0.0216	MDL	5.37	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0889	JQ	0.0201	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.121	JBQ	0.0144	MDL	5.37	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.0858	JB	0.0156	MDL	5.37	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.0960	JB	0.0151	MDL	5.37	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0684	JQ	0.0263	MDL	1.07	PQL	ng/Kg	J	Z
OCDD	1.23	JB	0.0212	MDL	10.7	PQL	ng/Kg	U	B
OCDF	0.213	JB	0.0310	MDL	10.7	PQL	ng/Kg	U	B

Sample ID: SL-232-SA6-SS-0.0-0.5 *Collected:* 10/6/2011 3:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	4.46	JB	0.0399	MDL	5.61	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	1.18	JB	0.0246	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.131	JBQ	0.0420	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.129	JBQ	0.0366	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.158	JBQ	0.0292	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.289	JB	0.0324	MDL	5.61	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.103	JBQ	0.0255	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.291	JB	0.0307	MDL	5.61	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0996	JQ	0.0313	MDL	5.61	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.104	JBQ	0.0340	MDL	5.61	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.0936	JB	0.0212	MDL	5.61	PQL	ng/Kg	U	B
2,3,4,6,7,8-HXCDF	0.175	JB	0.0251	MDL	5.61	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.209	JB	0.0214	MDL	5.61	PQL	ng/Kg	U	B
2,3,7,8-TCDF	0.0661	J	0.0364	MDL	1.12	PQL	ng/Kg	J	Z
OCDF	3.55	JB	0.0404	MDL	11.2	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-234-SA6-SS-0.0-0.5 *Collected:* 10/6/2011 12:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	3.56	JB	0.0220	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.338	JB	0.0372	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.200	JB	0.0436	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.386	JBQ	0.0378	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.648	JB	0.0422	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.369	JB	0.0319	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.588	JB	0.0420	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.183	JQ	0.0401	MDL	5.51	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.202	JB	0.0429	MDL	5.51	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.546	JB	0.0320	MDL	5.51	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.551	JB	0.0320	MDL	5.51	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.783	JBQ	0.0315	MDL	5.51	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.294	J	0.0639	MDL	1.10	PQL	ng/Kg	J	Z

Sample ID: SL-254-SA6-SB-2.5-3.5 *Collected:* 10/6/2011 12:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.33	JB	0.0314	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.913	JB	0.0185	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,4,7,8,9-HPCDF	0.0826	JB	0.0311	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,4,7,8-HxCDD	0.0357	JBQ	0.0309	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,4,7,8-HXCDF	0.281	JBQ	0.0277	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,6,7,8-HXCDD	0.247	JB	0.0313	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.172	JBQ	0.0229	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDD	0.198	JBQ	0.0307	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8,9-HXCDF	0.0849	JQ	0.0302	MDL	5.09	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0424	JB	0.0276	MDL	5.09	PQL	ng/Kg	U	B
1,2,3,7,8-PECDF	0.242	JB	0.0225	MDL	5.09	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.133	JB	0.0239	MDL	5.09	PQL	ng/Kg	U	B
2,3,4,7,8-PECDF	0.472	JB	0.0226	MDL	5.09	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.372	JQ	0.0526	MDL	1.02	PQL	ng/Kg	J	Z
OCDF	1.19	JB	0.0340	MDL	10.2	PQL	ng/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

* denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
FD	Field Duplicate Precision
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DX147

Method Blank Outlier Report

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK2860B370829	10/15/2011 8:29:00 AM	1,2,3,4,6,7,8-HPCDD	0.202 ng/Kg	DUP01-SA8S-QC-092911
		1,2,3,4,6,7,8-HPCDF	0.0913 ng/Kg	SL-001-SA8S-SS-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.0260 ng/Kg	SL-003-SA8S-SS-0.0-0.5
		1,2,3,6,7,8-HXCDD	0.0344 ng/Kg	SL-005-SA8S-SS-0.0-0.5
		1,2,3,6,7,8-HXCDF	0.0263 ng/Kg	SL-007-SA8S-SS-0.0-0.5
		1,2,3,7,8,9-HXCDD	0.0271 ng/Kg	SL-013-SA8S-SS-0.0-0.5
		1,2,3,7,8,9-HXCDF	0.0293 ng/Kg	SL-014-SA8S-SS-0.0-0.5
		1,2,3,7,8-PECDF	0.0281 ng/Kg	SL-126-SA7-SB-4.0-5.0
		2,3,4,6,7,8-HXCDF	0.0606 ng/Kg	SL-127-SA7-SB-4.0-5.0
		2,3,4,7,8-PECDF	0.0553 ng/Kg	SL-229-SA6-SS-0.0-0.5
		2,3,7,8-TCDD	0.0626 ng/Kg	
		2,3,7,8-TCDF	0.0391 ng/Kg	
		OCDD	0.380 ng/Kg	
		OCDF	0.189 ng/Kg	
BLK2920B371824	10/20/2011 6:24:00 PM	1,2,3,4,6,7,8-HPCDD	0.305 ng/Kg	SL-015-SA8S-SS-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.370 ng/Kg	SL-024-SA8S-SS-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.0805 ng/Kg	SL-177-SA7-SB-3.0-4.0
		1,2,3,4,7,8-HxCDD	0.0310 ng/Kg	SL-229-SA6-SB-2.0-3.0
		1,2,3,4,7,8-HXCDF	0.114 ng/Kg	SL-230-SA6-SB-4.0-5.0
		1,2,3,6,7,8-HXCDD	0.0294 ng/Kg	SL-230-SA6-SS-0.0-0.5
		1,2,3,6,7,8-HXCDF	0.0822 ng/Kg	SL-232-SA6-SB-2.5-3.5
		1,2,3,7,8,9-HXCDD	0.0415 ng/Kg	SL-232-SA6-SS-0.0-0.5
		1,2,3,7,8-PECDD	0.0488 ng/Kg	SL-234-SA6-SS-0.0-0.5
		1,2,3,7,8-PECDF	0.0392 ng/Kg	SL-254-SA6-SB-2.5-3.5
		2,3,4,6,7,8-HXCDF	0.0874 ng/Kg	
		2,3,4,7,8-PECDF	0.0693 ng/Kg	
		OCDD	0.653 ng/Kg	
		OCDF	0.256 ng/Kg	

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP01-SA8S-QC-092911(RES)	1,2,3,4,7,8,9-HPCDF	0.0624 ng/Kg	5.15U ng/Kg
DUP01-SA8S-QC-092911(RES)	1,2,3,7,8,9-HXCDF	0.0609 ng/Kg	5.15U ng/Kg
DUP01-SA8S-QC-092911(RES)	1,2,3,7,8-PECDF	0.0763 ng/Kg	5.15U ng/Kg
DUP01-SA8S-QC-092911(RES)	2,3,4,6,7,8-HXCDF	0.149 ng/Kg	5.15U ng/Kg
DUP01-SA8S-QC-092911(RES)	2,3,4,7,8-PECDF	0.233 ng/Kg	5.15U ng/Kg
SL-001-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.118 ng/Kg	5.28U ng/Kg
SL-001-SA8S-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.152 ng/Kg	5.28U ng/Kg
SL-001-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.125 ng/Kg	5.28U ng/Kg
SL-001-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0547 ng/Kg	5.28U ng/Kg
SL-001-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.0941 ng/Kg	5.28U ng/Kg
SL-001-SA8S-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.203 ng/Kg	5.28U ng/Kg
SL-001-SA8S-SS-0.0-0.5(RES)	2,3,7,8-TCDF	0.179 ng/Kg	1.06U ng/Kg
SL-003-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0457 ng/Kg	5.09U ng/Kg
SL-003-SA8S-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.165 ng/Kg	5.09U ng/Kg
SL-003-SA8S-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.113 ng/Kg	5.09U ng/Kg
SL-003-SA8S-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.150 ng/Kg	5.09U ng/Kg
SL-003-SA8S-SS-0.0-0.5(RES)	OCDF	0.882 ng/Kg	10.2U ng/Kg
SL-005-SA8S-SS-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	0.781 ng/Kg	5.09U ng/Kg
SL-005-SA8S-SS-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.151 ng/Kg	5.09U ng/Kg

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Method Blank Outlier Report

Lab Reporting Batch ID: DX147 Laboratory: LL

EDD Filename: DX147_v1 eQAPP Name: CDM_SSFL_110509

Method: 1613B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-005-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0559 ng/Kg	5.09U ng/Kg
SL-005-SA8S-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.0811 ng/Kg	5.09U ng/Kg
SL-005-SA8S-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0340 ng/Kg	5.09U ng/Kg
SL-005-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.0560 ng/Kg	5.09U ng/Kg
SL-005-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0374 ng/Kg	5.09U ng/Kg
SL-005-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.0389 ng/Kg	5.09U ng/Kg
SL-005-SA8S-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0512 ng/Kg	5.09U ng/Kg
SL-005-SA8S-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0720 ng/Kg	5.09U ng/Kg
SL-005-SA8S-SS-0.0-0.5(RES)	OCDF	0.353 ng/Kg	10.2U ng/Kg
SL-007-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0508 ng/Kg	5.14U ng/Kg
SL-007-SA8S-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.119 ng/Kg	5.14U ng/Kg
SL-007-SA8S-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0674 ng/Kg	5.14U ng/Kg
SL-007-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.118 ng/Kg	5.14U ng/Kg
SL-007-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0505 ng/Kg	5.14U ng/Kg
SL-007-SA8S-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0823 ng/Kg	5.14U ng/Kg
SL-007-SA8S-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0428 ng/Kg	5.14U ng/Kg
SL-007-SA8S-SS-0.0-0.5(RES)	2,3,7,8-TCDF	0.0545 ng/Kg	1.03U ng/Kg
SL-007-SA8S-SS-0.0-0.5(RES)	OCDF	0.884 ng/Kg	10.3U ng/Kg
SL-013-SA8S-SS-0.0-0.5(RES)	2,3,7,8-TCDF	0.183 ng/Kg	1.03U ng/Kg
SL-014-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0761 ng/Kg	5.20U ng/Kg
SL-014-SA8S-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.184 ng/Kg	5.20U ng/Kg
SL-014-SA8S-SS-0.0-0.5(RES)	2,3,7,8-TCDF	0.0992 ng/Kg	1.04U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.862 ng/Kg	5.14U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.108 ng/Kg	5.14U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0940 ng/Kg	5.14U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.189 ng/Kg	5.14U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.129 ng/Kg	5.14U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.0999 ng/Kg	5.14U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0439 ng/Kg	5.14U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.0687 ng/Kg	5.14U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.178 ng/Kg	5.14U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.220 ng/Kg	5.14U ng/Kg
SL-015-SA8S-SS-0.0-0.5(RES)	OCDF	0.875 ng/Kg	10.3U ng/Kg
SL-024-SA8S-SS-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.772 ng/Kg	5.00U ng/Kg
SL-024-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0874 ng/Kg	5.00U ng/Kg
SL-024-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.137 ng/Kg	5.00U ng/Kg
SL-024-SA8S-SS-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.179 ng/Kg	5.00U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-024-SA8S-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.138 ng/Kg	5.00U ng/Kg
SL-024-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.183 ng/Kg	5.00U ng/Kg
SL-024-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0493 ng/Kg	5.00U ng/Kg
SL-024-SA8S-SS-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.190 ng/Kg	5.00U ng/Kg
SL-024-SA8S-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.190 ng/Kg	5.00U ng/Kg
SL-024-SA8S-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0436 ng/Kg	5.00U ng/Kg
SL-024-SA8S-SS-0.0-0.5(RES)	OCDF	1.26 ng/Kg	10.0U ng/Kg
SL-126-SA7-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.211 ng/Kg	5.35U ng/Kg
SL-126-SA7-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0901 ng/Kg	5.35U ng/Kg
SL-126-SA7-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0193 ng/Kg	5.35U ng/Kg
SL-126-SA7-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.124 ng/Kg	5.35U ng/Kg
SL-126-SA7-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0429 ng/Kg	5.35U ng/Kg
SL-126-SA7-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0159 ng/Kg	5.35U ng/Kg
SL-126-SA7-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0412 ng/Kg	5.35U ng/Kg
SL-126-SA7-SB-4.0-5.0(RES)	OCDD	0.577 ng/Kg	10.7U ng/Kg
SL-126-SA7-SB-4.0-5.0(RES)	OCDF	0.124 ng/Kg	10.7U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.284 ng/Kg	5.11U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.163 ng/Kg	5.11U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0235 ng/Kg	5.11U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0346 ng/Kg	5.11U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0482 ng/Kg	5.11U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0636 ng/Kg	5.11U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0500 ng/Kg	5.11U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0254 ng/Kg	5.11U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0396 ng/Kg	5.11U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0610 ng/Kg	5.11U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	OCDD	0.862 ng/Kg	10.2U ng/Kg
SL-127-SA7-SB-4.0-5.0(RES)	OCDF	0.230 ng/Kg	10.2U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDD	0.339 ng/Kg	5.28U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDF	0.135 ng/Kg	5.28U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0411 ng/Kg	5.28U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	1,2,3,4,7,8-HXCDF	0.0413 ng/Kg	5.28U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	1,2,3,6,7,8-HXCDD	0.0551 ng/Kg	5.28U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	1,2,3,6,7,8-HXCDF	0.0191 ng/Kg	5.28U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	1,2,3,7,8,9-HXCDD	0.0930 ng/Kg	5.28U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	1,2,3,7,8-PECDD	0.0346 ng/Kg	5.28U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	1,2,3,7,8-PECDF	0.0291 ng/Kg	5.28U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-177-SA7-SB-3.0-4.0(RES)	2,3,4,6,7,8-HXCDF	0.0511 ng/Kg	5.28U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	OCDD	1.15 ng/Kg	10.6U ng/Kg
SL-177-SA7-SB-3.0-4.0(RES)	OCDF	0.179 ng/Kg	10.6U ng/Kg
SL-229-SA6-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.151 ng/Kg	1.05U ng/Kg
SL-229-SA6-SS-0.0-0.5(RES)	2,3,7,8-TCDF	0.184 ng/Kg	1.05U ng/Kg
SL-230-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.398 ng/Kg	5.18U ng/Kg
SL-230-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.336 ng/Kg	5.18U ng/Kg
SL-230-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.234 ng/Kg	5.18U ng/Kg
SL-230-SA6-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0606 ng/Kg	5.18U ng/Kg
SL-230-SA6-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.110 ng/Kg	5.18U ng/Kg
SL-230-SA6-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.322 ng/Kg	5.18U ng/Kg
SL-230-SA6-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0939 ng/Kg	5.18U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDD	0.308 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDF	0.175 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0271 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	1,2,3,4,7,8-HxCDD	0.0832 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	1,2,3,4,7,8-HXCDF	0.106 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDD	0.0730 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDF	0.0607 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDD	0.0963 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	1,2,3,7,8-PECDF	0.121 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	2,3,4,6,7,8-HXCDF	0.0858 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	2,3,4,7,8-PECDF	0.0960 ng/Kg	5.37U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	OCDD	1.23 ng/Kg	10.7U ng/Kg
SL-232-SA6-SB-2.5-3.5(RES)	OCDF	0.213 ng/Kg	10.7U ng/Kg
SL-232-SA6-SS-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	1.18 ng/Kg	5.61U ng/Kg
SL-232-SA6-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.131 ng/Kg	5.61U ng/Kg
SL-232-SA6-SS-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.129 ng/Kg	5.61U ng/Kg
SL-232-SA6-SS-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.158 ng/Kg	5.61U ng/Kg
SL-232-SA6-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.103 ng/Kg	5.61U ng/Kg
SL-232-SA6-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.104 ng/Kg	5.61U ng/Kg
SL-232-SA6-SS-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.0936 ng/Kg	5.61U ng/Kg
SL-232-SA6-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.175 ng/Kg	5.61U ng/Kg
SL-232-SA6-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.209 ng/Kg	5.61U ng/Kg
SL-234-SA6-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.338 ng/Kg	5.51U ng/Kg
SL-234-SA6-SS-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.386 ng/Kg	5.51U ng/Kg
SL-234-SA6-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.369 ng/Kg	5.51U ng/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: DX147 Laboratory: LL

EDD Filename: DX147_v1 eQAPP Name: CDM_SSFL_110509

Method: 1613B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-234-SA6-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.202 ng/Kg	5.51U ng/Kg
SL-254-SA6-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDF	0.913 ng/Kg	5.09U ng/Kg
SL-254-SA6-SB-2.5-3.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0826 ng/Kg	5.09U ng/Kg
SL-254-SA6-SB-2.5-3.5(RES)	1,2,3,4,7,8-HxCDD	0.0357 ng/Kg	5.09U ng/Kg
SL-254-SA6-SB-2.5-3.5(RES)	1,2,3,4,7,8-HXCDF	0.281 ng/Kg	5.09U ng/Kg
SL-254-SA6-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDF	0.172 ng/Kg	5.09U ng/Kg
SL-254-SA6-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDD	0.198 ng/Kg	5.09U ng/Kg
SL-254-SA6-SB-2.5-3.5(RES)	1,2,3,7,8-PECDD	0.0424 ng/Kg	5.09U ng/Kg
SL-254-SA6-SB-2.5-3.5(RES)	2,3,4,6,7,8-HXCDF	0.133 ng/Kg	5.09U ng/Kg
SL-254-SA6-SB-2.5-3.5(RES)	OCDF	1.19 ng/Kg	10.2U ng/Kg

Field Duplicate RPD Report

Lab Reporting Batch ID: DX147 Laboratory: LL

EDD Filename: DX147_v1 eQAPP Name: CDM_SSFL_110509

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-003-SA8S-SS-0.0-0.5	DUP01-SA8S-QC-092911			
MOISTURE	3.3	3.1	6		No Qualifiers Applied

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-003-SA8S-SS-0.0-0.5	DUP01-SA8S-QC-092911			
1,2,3,4,6,7,8-HPCDD	2.71	3.04	11	50.00	No Qualifiers Applied
1,2,3,4,6,7,8-HPCDF	0.574	0.615	7	50.00	
1,2,3,4,7,8,9-HPCDF	0.0457	0.0624	31	50.00	
1,2,3,4,7,8-HxCDD	0.0692	0.0704	2	50.00	
1,2,3,4,7,8-HXCDF	0.220	0.361	49	50.00	
1,2,3,6,7,8-HXCDD	0.165	0.193	16	50.00	
1,2,3,6,7,8-HXCDF	0.113	0.148	27	50.00	
1,2,3,7,8,9-HXCDD	0.163	0.138	17	50.00	
1,2,3,7,8-PECDD	0.0765	0.0846	10	50.00	
2,3,4,6,7,8-HXCDF	0.150	0.149	1	50.00	
2,3,4,7,8-PECDF	0.317	0.233	31	50.00	
2,3,7,8-TCDF	0.196	0.265	30	50.00	
OCDD	18.7	27.5	38	50.00	
OCDF	0.882	1.00	13	50.00	
1,2,3,7,8,9-HXCDF	5.09 U	0.0609	200	50.00	J(all detects)
1,2,3,7,8-PECDF	5.09 U	0.0763	200	50.00	UJ(all non-detects)

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling

Reporting Limit Outliers

Lab Reporting Batch ID: DX147 | Laboratory: LL

EDD Filename: DX147_v1 | eQAPP Name: CDM_SSFL_110509

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP01-SA8S-QC-092911	1,2,3,4,6,7,8-HPCDD	JB	3.04	5.15	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.615	5.15	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0624	5.15	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.0704	5.15	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	J	0.361	5.15	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.193	5.15	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.148	5.15	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.138	5.15	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.0609	5.15	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.0846	5.15	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0763	5.15	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.149	5.15	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.233	5.15	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.265	1.03	PQL	ng/Kg	
	OCDF	JB	1.00	10.3	PQL	ng/Kg	
SL-001-SA8S-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	2.77	5.28	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.592	5.28	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.118	5.28	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.0733	5.28	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.288	5.28	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.152	5.28	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.133	5.28	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.125	5.28	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.0547	5.28	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	0.0599	5.28	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0941	5.28	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.203	5.28	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.381	5.28	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.179	1.06	PQL	ng/Kg	
	OCDF	JB	1.15	10.6	PQL	ng/Kg	
SL-003-SA8S-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	2.71	5.09	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.574	5.09	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0457	5.09	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.0692	5.09	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	J	0.220	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.165	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.113	5.09	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDD	JBQ	0.163	5.09	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	0.0765	5.09	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.150	5.09	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.317	5.09	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.196	1.02	PQL	ng/Kg	
	OCDF	JB	0.882	10.2	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-005-SA8S-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	0.781	5.09	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.151	5.09	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0559	5.09	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.0315	5.09	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.0398	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0811	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0340	5.09	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0560	5.09	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.0374	5.09	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.0587	5.09	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0389	5.09	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0512	5.09	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0720	5.09	PQL	ng/Kg	
	OCDD	JB	5.28	10.2	PQL	ng/Kg	
	OCDF	JB	0.353	10.2	PQL	ng/Kg	
SL-007-SA8S-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	2.29	5.14	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.474	5.14	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0508	5.14	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JQ	0.0397	5.14	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JQ	0.0598	5.14	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.119	5.14	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0674	5.14	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.118	5.14	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.0505	5.14	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.0474	5.14	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0823	5.14	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0428	5.14	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0545	1.03	PQL	ng/Kg	
	OCDF	JB	0.884	10.3	PQL	ng/Kg	
SL-013-SA8S-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	2.17	5.14	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.756	5.14	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.211	5.14	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.224	5.14	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	J	0.438	5.14	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.253	5.14	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.372	5.14	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.289	5.14	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.222	5.14	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	0.188	5.14	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.268	5.14	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.311	5.14	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.601	5.14	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.183	1.03	PQL	ng/Kg	
	OCDF	JB	1.27	10.3	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-014-SA8S-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	0.690	5.20	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0761	5.20	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.194	5.20	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	J	0.220	5.20	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.247	5.20	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.172	5.20	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.210	5.20	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.164	5.20	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.220	5.20	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.184	5.20	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.409	5.20	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0992	1.04	PQL	ng/Kg	
	OCDF	JB	1.33	10.4	PQL	ng/Kg	
SL-015-SA8S-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	5.08	5.14	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.862	5.14	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.108	5.14	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0940	5.14	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.189	5.14	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.169	5.14	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.129	5.14	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0999	5.14	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JQ	0.0687	5.14	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.0439	5.14	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0687	5.14	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.178	5.14	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.220	5.14	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0580	1.03	PQL	ng/Kg	
	OCDF	JB	0.875	10.3	PQL	ng/Kg	
SL-024-SA8S-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	3.94	5.00	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.772	5.00	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0874	5.00	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.137	5.00	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.179	5.00	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.225	5.00	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.138	5.00	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.183	5.00	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JQ	0.0642	5.00	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0493	5.00	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.190	5.00	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.190	5.00	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0436	5.00	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0482	1.00	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.282	1.00	PQL	ng/Kg	
	OCDF	JB	1.26	10.0	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-126-SA7-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JBQ	0.211	5.35	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.0901	5.35	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0193	5.35	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.124	5.35	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.234	5.35	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.210	5.35	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JB	0.0429	5.35	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0159	5.35	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0412	5.35	PQL	ng/Kg	
	OCDD	JB	0.577	10.7	PQL	ng/Kg	
	OCDF	JBQ	0.124	10.7	PQL	ng/Kg	
SL-127-SA7-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.284	5.11	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.163	5.11	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0235	5.11	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	0.0219	5.11	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0346	5.11	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0482	5.11	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0636	5.11	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0500	5.11	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.0360	5.11	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0254	5.11	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0396	5.11	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0610	5.11	PQL	ng/Kg	
	OCDD	JB	0.862	10.2	PQL	ng/Kg	
	OCDF	JB	0.230	10.2	PQL	ng/Kg	
SL-177-SA7-SB-3.0-4.0	1,2,3,4,6,7,8-HPCDD	JB	0.339	5.28	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.135	5.28	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0411	5.28	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0413	5.28	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0551	5.28	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0191	5.28	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0930	5.28	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JQ	0.0556	5.28	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0346	5.28	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0291	5.28	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0511	5.28	PQL	ng/Kg	
	2,3,7,8-TCDD	JQ	0.0319	1.06	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0344	1.06	PQL	ng/Kg	
	OCDD	JB	1.15	10.6	PQL	ng/Kg	
	OCDF	JB	0.179	10.6	PQL	ng/Kg	
SL-229-SA6-SB-2.0-3.0	1,2,3,4,7,8,9-HPCDF	JB	3.51	5.18	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	2.52	5.18	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	1.65	5.18	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	1.38	5.18	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	3.92	5.18	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	J	0.432	5.18	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	1.03	5.18	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JB	0.714	5.18	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	2.20	5.18	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.834	5.18	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.224	1.04	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.319	1.04	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-229-SA6-SS-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	2.79	5.23	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	J	1.87	5.23	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	J	1.32	5.23	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	1.06	5.23	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	2.84	5.23	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.254	5.23	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	2.23	5.23	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JBQ	0.255	5.23	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	1.79	5.23	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.555	5.23	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.151	1.05	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.184	1.05	PQL	ng/Kg	
SL-230-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDF	JB	3.22	5.18	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.398	5.18	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.206	5.18	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.336	5.18	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.544	5.18	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.234	5.18	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.226	5.18	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JQ	0.0487	5.18	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0606	5.18	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.110	5.18	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.322	5.18	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0939	5.18	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0620	1.04	PQL	ng/Kg	
	OCDF	JB	7.59	10.4	PQL	ng/Kg	
SL-230-SA6-SS-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	1.20	5.34	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.816	5.34	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	1.95	5.34	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.49	5.34	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	1.07	5.34	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.51	5.34	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	J	0.316	5.34	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.427	5.34	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.45	5.34	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	1.09	5.34	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.35	5.34	PQL	ng/Kg	
	2,3,7,8-TCDD	J	0.0733	1.07	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.939	1.07	PQL	ng/Kg	
SL-232-SA6-SB-2.5-3.5	1,2,3,4,6,7,8-HPCDD	JBQ	0.308	5.37	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.175	5.37	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0271	5.37	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0832	5.37	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.106	5.37	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0730	5.37	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0607	5.37	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0963	5.37	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JQ	0.0889	5.37	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.121	5.37	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0858	5.37	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0960	5.37	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0684	1.07	PQL	ng/Kg	
	OCDD	JB	1.23	10.7	PQL	ng/Kg	
	OCDF	JB	0.213	10.7	PQL	ng/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DX147 **Laboratory: LL**

EDD Filename: DX147_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-232-SA6-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	4.46	5.61	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	1.18	5.61	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.131	5.61	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.129	5.61	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.158	5.61	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.289	5.61	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.103	5.61	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.291	5.61	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JQ	0.0996	5.61	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JBQ	0.104	5.61	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0936	5.61	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.175	5.61	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.209	5.61	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0661	1.12	PQL	ng/Kg	
	OCDF	JB	3.55	11.2	PQL	ng/Kg	
SL-234-SA6-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	3.56	5.51	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.338	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.200	5.51	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.386	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.648	5.51	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.369	5.51	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.588	5.51	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JQ	0.183	5.51	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.202	5.51	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.546	5.51	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.551	5.51	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.783	5.51	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.294	1.10	PQL	ng/Kg	
SL-254-SA6-SB-2.5-3.5	1,2,3,4,6,7,8-HPCDD	JB	2.33	5.09	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.913	5.09	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0826	5.09	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0357	5.09	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.281	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.247	5.09	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.172	5.09	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.198	5.09	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JQ	0.0849	5.09	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JB	0.0424	5.09	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.242	5.09	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.133	5.09	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.472	5.09	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.372	1.02	PQL	ng/Kg	
	OCDF	JB	1.19	10.2	PQL	ng/Kg	

Enclosure II

Level IV Validation Reports

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: September 29, 2011

LDC Report Date: January 31, 2012

Matrix: Soil

Parameters: Dioxins/Dibenzofurans

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DX147

Sample Identification

SL-001-SA8S-SS-0.0-0.5
SL-003-SA8S-SS-0.0-0.5
SL-005-SA8S-SS-0.0-0.5
SL-007-SA8S-SS-0.0-0.5
SL-013-SA8S-SS-0.0-0.5
SL-014-SA8S-SS-0.0-0.5
SL-015-SA8S-SS-0.0-0.5
SL-024-SA8S-SS-0.0-0.5
DUP01-SA8S-QC-092911
SL-126-SA7-SB-4.0-5.0
SL-127-SA7-SB-4.0-5.0
SL-177-SA7-SB-3.0-4.0
SL-229-SA6-SS-0.0-0.5
SL-230-SA6-SS-0.0-0.5
SL-234-SA6-SS-0.0-0.5
SL-232-SA6-SS-0.0-0.5
SL-232-SA6-SB-2.5-3.5
SL-229-SA6-SB-2.0-3.0
SL-230-SA6-SB-4.0-5.0
SL-254-SA6-SB-2.5-3.5
SL-003-SA8S-SS-0.0-0.5MS
SL-003-SA8S-SS-0.0-0.5MSD

Introduction

This data review covers 22 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 1613B for Polychlorinated Dioxins/Dibenzofurans.

This review follows the Quality Assurance Project Plan for Santa Susana Field Laboratory (SSFL), RCRA Facility Investigation, Surficial Media Operable Unit (March 2009, Revision 4) and the USEPA Contract Laboratory Program National Functional Guidelines for Polychlorinated Dioxins/Dibenzofurans Data Review (September 2005).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. HRGC/HRMS Instrument Performance Check

Instrument performance was checked at the required daily frequency.

The chromatographic resolution between 2,3,7,8-TCDD and the peaks representing any other unlabeled TCDD isomers was resolved with a valley of less than or equal to 25%.

PFK and static resolving power were within validation criteria.

III. Initial Calibration

A five point initial calibration was performed as required by the method.

Percent relative standard deviations (%RSD) were less than or equal to 20.0% for unlabeled compounds and less than or equal to 35.0% for labeled compounds.

The ion abundance ratios for all PCDDs and PCDFs were within validation criteria.

The minimum S/N ratio was greater than or equal to 10 for each unlabeled compound and labeled compound.

IV. Routine Calibration (Continuing)

Routine calibration was performed at the required frequencies.

All of the routine calibration percent differences (%D) between the initial calibration RRF and the routine calibration RRF were within QC limits.

The ion abundance ratios for all PCDDs and PCDFs were within validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No polychlorinated dioxin/dibenzofuran contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound	Concentration	Associated Samples
BLK286001	10/13/11	2,3,7,8-TCDF	0.0391 ng/Kg	SL-001-SA8S-SS-0.0-0.5
		2,3,7,8-TCDD	0.0626 ng/Kg	SL-003-SA8S-SS-0.0-0.5
		1,2,3,7,8-PeCDF	0.0281 ng/Kg	SL-005-SA8S-SS-0.0-0.5
		2,3,4,7,8-PeCDF	0.0553 ng/Kg	SL-007-SA8S-SS-0.0-0.5
		1,2,3,6,7,8-HxCDF	0.0263 ng/Kg	SL-013-SA8S-SS-0.0-0.5
		2,3,4,6,7,8-HxCDF	0.0606 ng/Kg	SL-014-SA8S-SS-0.0-0.5
		1,2,3,6,7,8-HxCDD	0.0344 ng/Kg	DUP01-SA8S-QC-092911
		1,2,3,7,8,9-HxCDD	0.0271 ng/Kg	SL-126-SA7-SB-4.0-5.0
		1,2,3,7,8,9-HxCDF	0.0293 ng/Kg	SL-127-SA7-SB-4.0-5.0
		1,2,3,4,6,7,8-HpCDF	0.0913 ng/Kg	SL-229-SA6-SS-0.0-0.5
		1,2,3,4,6,7,8-HpCDD	0.202 ng/Kg	
		1,2,3,4,7,8,9-HpCDF	0.0260 ng/Kg	
		OCDD	0.380 ng/Kg	
		OCDF	0.189 ng/Kg	
BLK292003	10/19/11	1,2,3,7,8-PeCDF	0.0392 ng/Kg	SL-015-SA8S-SS-0.0-0.5
		2,3,4,7,8-PeCDF	0.0693 ng/Kg	SL-024-SA8S-SS-0.0-0.5
		1,2,3,7,8-PeCDD	0.0488 ng/Kg	SL-177-SA7-SB-3.0-4.0
		1,2,3,4,7,8-HxCDF	0.114 ng/Kg	SL-230-SA6-SS-0.0-0.5
		1,2,3,6,7,8-HxCDF	0.0822 ng/Kg	SL-234-SA6-SS-0.0-0.5
		2,3,4,6,7,8-HxCDF	0.0874 ng/Kg	SL-232-SA6-SS-0.0-0.5
		1,2,3,4,7,8-HxCDD	0.0310 ng/Kg	SL-232-SA6-SB-2.5-3.5
		1,2,3,6,7,8-HxCDD	0.0294 ng/Kg	SL-229-SA6-SB-2.0-3.0
		1,2,3,7,8,9-HxCDD	0.0415 ng/Kg	SL-230-SA6-SB-4.0-5.0
		1,2,3,4,6,7,8-HpCDF	0.370 ng/Kg	SL-254-SA6-SB-2.5-3.5
		1,2,3,4,6,7,8-HpCDD	0.305 ng/Kg	
		1,2,3,4,7,8,9-HpCDF	0.0805 ng/Kg	
		OCDD	0.653 ng/Kg	
		OCDF	0.256 ng/Kg	

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound	Reported Concentration	Modified Final Concentration
SL-001-SA8S-SS-0.0-0.5	2,3,7,8-TCDF	0.179 ng/Kg	0.179U ng/Kg
	1,2,3,7,8-PeCDF	0.0941 ng/Kg	0.0941U ng/Kg
	2,3,4,6,7,8-HxCDF	0.203 ng/Kg	0.203U ng/Kg
	1,2,3,6,7,8-HxCDD	0.152 ng/Kg	0.152U ng/Kg
	1,2,3,7,8,9-HxCDD	0.125 ng/Kg	0.125U ng/Kg
	1,2,3,7,8,9-HxCDF	0.0547 ng/Kg	0.0547U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.118 ng/Kg	0.118U ng/Kg
SL-003-SA8S-SS-0.0-0.5	1,2,3,6,7,8-HxCDF	0.113 ng/Kg	0.113U ng/Kg
	2,3,4,6,7,8-HxCDF	0.150 ng/Kg	0.150U ng/Kg
	1,2,3,6,7,8-HxCDD	0.165 ng/Kg	0.165U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0457 ng/Kg	0.0457U ng/Kg
	OCDF	0.882 ng/Kg	0.882U ng/Kg

Sample	Compound	Reported Concentration	Modified Final Concentration
SL-005-SA8S-SS-0.0-0.5	1,2,3,7,8-PeCDF	0.0389 ng/Kg	0.0389U ng/Kg
	2,3,4,7,8-PeCDF	0.0720 ng/Kg	0.0720U ng/Kg
	1,2,3,6,7,8-HxCDF	0.0340 ng/Kg	0.0340U ng/Kg
	2,3,4,6,7,8-HxCDF	0.0512 ng/Kg	0.0512U ng/Kg
	1,2,3,6,7,8-HxCDD	0.0811 ng/Kg	0.0811U ng/Kg
	1,2,3,7,8,9-HxCDD	0.0560 ng/Kg	0.0560U ng/Kg
	1,2,3,7,8,9-HxCDF	0.0374 ng/Kg	0.0374U ng/Kg
	1,2,3,4,6,7,8-HpCDF	0.151 ng/Kg	0.151U ng/Kg
	1,2,3,4,6,7,8-HpCDD	0.781 ng/Kg	0.781U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0559 ng/Kg	0.0559U ng/Kg
	OCDF	0.353 ng/Kg	0.353U ng/Kg
SL-007-SA8S-SS-0.0-0.5	2,3,7,8-TCDF	0.0545 ng/Kg	0.0545U ng/Kg
	2,3,4,7,8-PeCDF	0.0428 ng/Kg	0.0428U ng/Kg
	1,2,3,6,7,8-HxCDF	0.0674 ng/Kg	0.0674U ng/Kg
	2,3,4,6,7,8-HxCDF	0.0823 ng/Kg	0.0823U ng/Kg
	1,2,3,6,7,8-HxCDD	0.119 ng/Kg	0.119U ng/Kg
	1,2,3,7,8,9-HxCDD	0.118 ng/Kg	0.118U ng/Kg
	1,2,3,7,8,9-HxCDF	0.0505 ng/Kg	0.0505U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0508 ng/Kg	0.0508U ng/Kg
	OCDF	0.884 ng/Kg	0.884U ng/Kg
SL-013-SA8S-SS-0.0-0.5	2,3,7,8-TCDF	0.183 ng/Kg	0.183U ng/Kg
SL-014-SA8S-SS-0.0-0.5	2,3,7,8-TCDF	0.0992 ng/Kg	0.0992U ng/Kg
	2,3,4,6,7,8-HxCDF	0.184 ng/Kg	0.184U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0761 ng/Kg	0.0761U ng/Kg
DUP01-SA8S-QC-092911	1,2,3,7,8-PeCDF	0.0763 ng/Kg	0.0763U ng/Kg
	2,3,4,7,8-PeCDF	0.233 ng/Kg	0.233U ng/Kg
	2,3,4,6,7,8-HxCDF	0.149 ng/Kg	0.149U ng/Kg
	1,2,3,7,8,9-HxCDF	0.0609 ng/Kg	0.0609U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0624 ng/Kg	0.0624U ng/Kg
SL-126-SA7-SB-4.0-5.0	1,2,3,7,8-PeCDF	0.0429 ng/Kg	0.0429U ng/Kg
	2,3,4,7,8-PeCDF	0.0412 ng/Kg	0.0412U ng/Kg
	2,3,4,6,7,8-HxCDF	0.0159 ng/Kg	0.0159U ng/Kg
	1,2,3,6,7,8-HxCDD	0.124 ng/Kg	0.124U ng/Kg
	1,2,3,4,6,7,8-HpCDF	0.0901 ng/Kg	0.0901U ng/Kg
	1,2,3,4,6,7,8-HpCDD	0.211 ng/Kg	0.211U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0193 ng/Kg	0.0193U ng/Kg
	OCDD	0.577 ng/Kg	0.577U ng/Kg
	OCDF	0.124 ng/Kg	0.124U ng/Kg
SL-127-SA7-SB-4.0-5.0	1,2,3,7,8-PeCDF	0.0254 ng/Kg	0.0254U ng/Kg
	2,3,4,7,8-PeCDF	0.0610 ng/Kg	0.0610U ng/Kg
	1,2,3,6,7,8-HxCDF	0.0482 ng/Kg	0.0482U ng/Kg
	2,3,4,6,7,8-HxCDF	0.0396 ng/Kg	0.0396U ng/Kg
	1,2,3,6,7,8-HxCDD	0.0346 ng/Kg	0.0346U ng/Kg
	1,2,3,7,8,9-HxCDD	0.0636 ng/Kg	0.0636U ng/Kg
	1,2,3,7,8,9-HxCDF	0.0500 ng/Kg	0.0500U ng/Kg
	1,2,3,4,6,7,8-HpCDF	0.163 ng/Kg	0.163U ng/Kg
	1,2,3,4,6,7,8-HpCDD	0.284 ng/Kg	0.284U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0235 ng/Kg	0.0235U ng/Kg
	OCDD	0.862 ng/Kg	0.862U ng/Kg
	OCDF	0.230 ng/Kg	0.230U ng/Kg
SL-229-SA6-SS-0.0-0.5	2,3,7,8-TCDF	0.184 ng/Kg	0.184U ng/Kg
	2,3,7,8-TCDD	0.151 ng/Kg	0.151U ng/Kg

Sample	Compound	Reported Concentration	Modified Final Concentration
SL-015-SA8S-SS-0.0-0.5 SL-024-SA8S-SS-0.0-0.5	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF OCDF	0.0687 ng/Kg 0.220 ng/Kg 0.0439 ng/Kg 0.189 ng/Kg 0.129 ng/Kg 0.178 ng/Kg 0.0940 ng/Kg 0.0999 ng/Kg 0.862 ng/Kg 0.108 ng/Kg 0.875 ng/Kg	0.0687U ng/Kg 0.220U ng/Kg 0.0439U ng/Kg 0.189U ng/Kg 0.129U ng/Kg 0.178U ng/Kg 0.0940U ng/Kg 0.0999U ng/Kg 0.862U ng/Kg 0.108U ng/Kg 0.875U ng/Kg
SL-024-SA8S-SS-0.0-0.5	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF OCDF	0.190 ng/Kg 0.0436 ng/Kg 0.0493 ng/Kg 0.179 ng/Kg 0.138 ng/Kg 0.190 ng/Kg 0.137 ng/Kg 0.183 ng/Kg 0.772 ng/Kg 0.0874 ng/Kg 1.26 ng/Kg	0.190U ng/Kg 0.0436U ng/Kg 0.0493U ng/Kg 0.179U ng/Kg 0.138U ng/Kg 0.190U ng/Kg 0.137U ng/Kg 0.183U ng/Kg 0.772U ng/Kg 0.0874U ng/Kg 1.26U ng/Kg
SL-177-SA7-SB-3.0-4.0	1,2,3,7,8-PeCDF 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDD 1,2,3,4,7,8,9-HpCDF OCDD OCDF	0.0291 ng/Kg 0.0346 ng/Kg 0.0413 ng/Kg 0.0191 ng/Kg 0.0511 ng/Kg 0.0551 ng/Kg 0.0930 ng/Kg 0.135 ng/Kg 0.339 ng/Kg 0.0411 ng/Kg 1.15 ng/Kg 0.179 ng/Kg	0.0291U ng/Kg 0.0346U ng/Kg 0.0413U ng/Kg 0.0191U ng/Kg 0.0511U ng/Kg 0.0551U ng/Kg 0.0930U ng/Kg 0.135U ng/Kg 0.339U ng/Kg 0.0411U ng/Kg 1.15U ng/Kg 0.179U ng/Kg
SL-234-SA6-SS-0.0-0.5	1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,4,7,8,9-HpCDF	0.202 ng/Kg 0.386 ng/Kg 0.369 ng/Kg 0.338 ng/Kg	0.202U ng/Kg 0.386U ng/Kg 0.369U ng/Kg 0.338U ng/Kg
SL-232-SA6-SS-0.0-0.5	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF	0.0936 ng/Kg 0.209 ng/Kg 0.104 ng/Kg 0.158 ng/Kg 0.103 ng/Kg 0.175 ng/Kg 0.129 ng/Kg 1.18 ng/Kg 0.131 ng/Kg	0.0936U ng/Kg 0.209U ng/Kg 0.104U ng/Kg 0.158U ng/Kg 0.103U ng/Kg 0.175U ng/Kg 0.129U ng/Kg 1.18U ng/Kg 0.131U ng/Kg

Sample	Compound	Reported Concentration	Modified Final Concentration
SL-232-SA6-SB-2.5-3.5	1,2,3,7,8-PeCDF	0.121 ng/Kg	0.121U ng/Kg
	2,3,4,7,8-PeCDF	0.0960 ng/Kg	0.0960U ng/Kg
	1,2,3,4,7,8-HxCDF	0.106 ng/Kg	0.106U ng/Kg
	1,2,3,6,7,8-HxCDF	0.0607 ng/Kg	0.0607U ng/Kg
	2,3,4,6,7,8-HxCDF	0.0858 ng/Kg	0.0858U ng/Kg
	1,2,3,4,7,8-HxCDD	0.0832 ng/Kg	0.0832U ng/Kg
	1,2,3,6,7,8-HxCDD	0.0730 ng/Kg	0.0730U ng/Kg
	1,2,3,7,8,9-HxCDD	0.0963 ng/Kg	0.0963U ng/Kg
	1,2,3,4,6,7,8-HpCDF	0.175 ng/Kg	0.175U ng/Kg
	1,2,3,4,6,7,8-HpCDD	0.308 ng/Kg	0.308U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0271 ng/Kg	0.0271U ng/Kg
	OCDD	1.23 ng/Kg	1.23U ng/Kg
	OCDF	0.213 ng/Kg	0.213U ng/Kg
SL-230-SA6-SB-4.0-5.0	1,2,3,7,8-PeCDF	0.110 ng/Kg	0.110U ng/Kg
	2,3,4,7,8-PeCDF	0.0939 ng/Kg	0.0939U ng/Kg
	1,2,3,7,8-PeCDD	0.0606 ng/Kg	0.0606U ng/Kg
	1,2,3,4,7,8-HxCDF	0.336 ng/Kg	0.336U ng/Kg
	1,2,3,6,7,8-HxCDF	0.234 ng/Kg	0.234U ng/Kg
	2,3,4,6,7,8-HxCDF	0.322 ng/Kg	0.322U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.398 ng/Kg	0.398U ng/Kg
SL-254-SA6-SB-2.5-3.5	1,2,3,7,8-PeCDD	0.0424 ng/Kg	0.0424U ng/Kg
	1,2,3,4,7,8-HxCDF	0.281 ng/Kg	0.281U ng/Kg
	1,2,3,6,7,8-HxCDF	0.172 ng/Kg	0.172U ng/Kg
	2,3,4,6,7,8-HxCDF	0.133 ng/Kg	0.133U ng/Kg
	1,2,3,4,7,8-HxCDD	0.0357 ng/Kg	0.0357U ng/Kg
	1,2,3,7,8,9-HxCDD	0.198 ng/Kg	0.198U ng/Kg
	1,2,3,4,6,7,8-HpCDF	0.913 ng/Kg	0.913U ng/Kg
	1,2,3,4,7,8,9-HpCDF	0.0826 ng/Kg	0.0826U ng/Kg
	OCDF	1.19 ng/Kg	1.19U ng/Kg

No field blanks were identified in this SDG.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within the QC limits.

VII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. The percent recoveries (%R) were within the QC limits.

VIII. Regional Quality Assurance and Quality Control

Not applicable.

IX. Internal Standards

All internal standard recoveries were within QC limits.

X. Target Compound Identifications

All target compound identifications were within validation criteria.

XI. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DX147	All compounds reported below the RL.	J (all detects)	A

XII. System Performance

The system performance was acceptable.

XIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIV. Field Duplicates

Samples SL-003-SA8S-SS-0.0-0.5 and DUP01-SA8S-QC-092911 were identified as field duplicates. No polychlorinated dioxins/dibenzofurans were detected in any of the samples with the following exceptions:

Compound	Concentration (ng/Kg)		RPD (Limits)	Flags	A or P
	SL-003-SA8S-SS-0.0-0.5	DUP01-SA8S-QC-092911			
1,2,3,7,8-PeCDD	0.0765	0.0846	10 (≤50)	-	-
1,2,3,4,7,8-HxCDD	0.0692	0.0704	2 (≤50)	-	-
1,2,3,6,7,8-HxCDD	0.165	0.193	16 (≤50)	-	-
1,2,3,7,8,9-HxCDD	0.163	0.138	17 (≤50)	-	-
1,2,3,4,6,7,8-HpCDD	2.71	3.04	11 (≤50)	-	-
OCDD	18.7	27.5	38 (≤50)	-	-
2,3,7,8-TCDF	0.196	0.265	30 (≤50)	-	-

Compound	Concentration (ng/Kg)		RPD (Limits)	Flags	A or P
	SL-003-SA8S-SS-0.0-0.5	DUP01-SA8S-QC-092911			
1,2,3,7,8-PeCDF	5.09U	0.0763	200 (≤50)	J (all detects) UJ (all non-detects)	A
2,3,4,7,8-PeCDF	0.317	0.233	31 (≤50)	-	-
1,2,3,4,7,8-HxCDF	0.220	0.361	49 (≤50)	-	-
1,2,3,6,7,8-HxCDF	0.113	0.148	27 (≤50)	-	-
1,2,3,7,8,9-HxCDF	5.09U	0.0609	200 (≤50)	J (all detects) UJ (all non-detects)	A
2,3,4,6,7,8-HxCDF	0.150	0.149	1 (≤50)	-	-
1,2,3,4,6,7,8-HpCDF	0.574	0.615	7 (≤50)	-	-
1,2,3,4,7,8,9-HpCDF	0.0457	0.0624	31 (≤50)	-	-
OCDF	0.882	1.0	13 (≤50)	-	-

Santa Susana Field Laboratory
Dioxins/Dibenzofurans - Data Qualification Summary - SDG DX147

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DX147	SL-001-SA8S-SS-0.0-0.5 SL-003-SA8S-SS-0.0-0.5 SL-005-SA8S-SS-0.0-0.5 SL-007-SA8S-SS-0.0-0.5 SL-013-SA8S-SS-0.0-0.5 SL-014-SA8S-SS-0.0-0.5 SL-015-SA8S-SS-0.0-0.5 SL-024-SA8S-SS-0.0-0.5 DUP01-SA8S-QC-092911 SL-126-SA7-SB-4.0-5.0 SL-127-SA7-SB-4.0-5.0 SL-177-SA7-SB-3.0-4.0 SL-229-SA6-SS-0.0-0.5 SL-230-SA6-SS-0.0-0.5 SL-234-SA6-SS-0.0-0.5 SL-232-SA6-SS-0.0-0.5 SL-232-SA6-SB-2.5-3.5 SL-229-SA6-SB-2.0-3.0 SL-230-SA6-SB-4.0-5.0 SL-254-SA6-SB-2.5-3.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)
DX147	SL-003-SA8S-SS-0.0-0.5 DUP01-SA8S-QC-09291	1,2,3,7,8-PeCDF 1,2,3,7,8,9-HxCDF	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Dioxins/Dibenzofurans - Laboratory Blank Data Qualification Summary - SDG DX147

SDG	Sample	Compound	Modified Final Concentration	A or P	Code
DX147	SL-001-SA8S-SS-0.0-0.5	2,3,7,8-TCDF 1,2,3,7,8-PeCDF 2,3,4,6,7,8-HxCDF 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,7,8,9-HxCDF 1,2,3,4,7,8,9-HpCDF	0.179U ng/Kg 0.0941U ng/Kg 0.203U ng/Kg 0.152U ng/Kg 0.125U ng/Kg 0.0547U ng/Kg 0.118U ng/Kg	A	B
DX147	SL-003-SA8S-SS-0.0-0.5	1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,6,7,8-HxCDD 1,2,3,4,7,8,9-HpCDF OCDF	0.113U ng/Kg 0.150U ng/Kg 0.165U ng/Kg 0.0457U ng/Kg 0.882U ng/Kg	A	B
DX147	SL-005-SA8S-SS-0.0-0.5	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,7,8,9-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDD 1,2,3,4,7,8,9-HpCDF OCDF	0.0389U ng/Kg 0.0720U ng/Kg 0.0340U ng/Kg 0.0512U ng/Kg 0.0811U ng/Kg 0.0560U ng/Kg 0.0374U ng/Kg 0.151U ng/Kg 0.781U ng/Kg 0.0559U ng/Kg 0.353U ng/Kg	A	B

SDG	Sample	Compound	Modified Final Concentration	A or P	Code
DX147	SL-007-SA8S-SS-0.0-0.5	2,3,7,8-TCDF 2,3,4,7,8-PeCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,7,8,9-HxCDF 1,2,3,4,7,8,9-HpCDF OCDF	0.0545U ng/Kg 0.0428U ng/Kg 0.0674U ng/Kg 0.0823U ng/Kg 0.119U ng/Kg 0.118U ng/Kg 0.0505U ng/Kg 0.0508U ng/Kg 0.884U ng/Kg	A	B
DX147	SL-013-SA8S-SS-0.0-0.5	2,3,7,8-TCDF	0.183U ng/Kg	A	B
DX147	SL-014-SA8S-SS-0.0-0.5	2,3,7,8-TCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8,9-HpCDF	0.0992U ng/Kg 0.184U ng/Kg 0.0761U ng/Kg	A	B
DX147	DUP01-SA8S-QC-092911	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 2,3,4,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 1,2,3,4,7,8,9-HpCDF	0.0763U ng/Kg 0.233U ng/Kg 0.149U ng/Kg 0.0609U ng/Kg 0.0624U ng/Kg	A	B
DX147	SL-126-SA7-SB-4.0-5.0	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 2,3,4,6,7,8-HxCDF 1,2,3,6,7,8-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDD 1,2,3,4,7,8,9-HpCDF OCDD OCDF	0.0429U ng/Kg 0.0412U ng/Kg 0.0159U ng/Kg 0.124U ng/Kg 0.0901U ng/Kg 0.211U ng/Kg 0.0193U ng/Kg 0.577U ng/Kg 0.124U ng/Kg	A	B
DX147	SL-127-SA7-SB-4.0-5.0	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,7,8,9-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDD 1,2,3,4,7,8,9-HpCDF OCDD OCDF	0.0254U ng/Kg 0.0610U ng/Kg 0.0482U ng/Kg 0.0396U ng/Kg 0.0346U ng/Kg 0.0636U ng/Kg 0.0500U ng/Kg 0.163U ng/Kg 0.284U ng/Kg 0.0235U ng/Kg 0.862U ng/Kg 0.230U ng/Kg	A	B
DX147	SL-229-SA6-SS-0.0-0.5	2,3,7,8-TCDF 2,3,7,8-TCDD	0.184U ng/Kg 0.151U ng/Kg	A	B
DX147	SL-015-SA8S-SS-0.0-0.5 SL-024-SA8S-SS-0.0-0.5	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF OCDF	0.0687U ng/Kg 0.220U ng/Kg 0.0439U ng/Kg 0.189U ng/Kg 0.129U ng/Kg 0.178U ng/Kg 0.0940U ng/Kg 0.0999U ng/Kg 0.862U ng/Kg 0.108U ng/Kg 0.875U ng/Kg	A	B

SDG	Sample	Compound	Modified Final Concentration	A or P	Code
DX147	SL-024-SA8S-SS-0.0-0.5	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF OCDF	0.190U ng/Kg 0.0436U ng/Kg 0.0493U ng/Kg 0.179U ng/Kg 0.138U ng/Kg 0.190U ng/Kg 0.137U ng/Kg 0.183U ng/Kg 0.772U ng/Kg 0.0874U ng/Kg 1.26U ng/Kg	A	B
DX147	SL-177-SA7-SB-3.0-4.0	1,2,3,7,8-PeCDF 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDD 1,2,3,4,7,8,9-HpCDF OCDD OCDF	0.0291U ng/Kg 0.0346U ng/Kg 0.0413U ng/Kg 0.0191U ng/Kg 0.0511U ng/Kg 0.0551U ng/Kg 0.0930U ng/Kg 0.135U ng/Kg 0.339U ng/Kg 0.0411U ng/Kg 1.15U ng/Kg 0.179U ng/Kg	A	B
DX147	SL-234-SA6-SS-0.0-0.5	1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,4,7,8,9-HpCDF	0.202U ng/Kg 0.386U ng/Kg 0.369U ng/Kg 0.338U ng/Kg	A	B
DX147	SL-232-SA6-SS-0.0-0.5	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF	0.0936U ng/Kg 0.209U ng/Kg 0.104U ng/Kg 0.158U ng/Kg 0.103U ng/Kg 0.175U ng/Kg 0.129U ng/Kg 1.18U ng/Kg 0.131U ng/Kg	A	B
DX147	SL-232-SA6-SB-2.5-3.5	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDD 1,2,3,4,7,8,9-HpCDF OCDD OCDF	0.121U ng/Kg 0.0960U ng/Kg 0.106U ng/Kg 0.0607U ng/Kg 0.0858U ng/Kg 0.0832U ng/Kg 0.0730U ng/Kg 0.0963U ng/Kg 0.175U ng/Kg 0.308U ng/Kg 0.0271U ng/Kg 1.23U ng/Kg 0.213U ng/Kg	A	B
DX147	SL-230-SA6-SB-4.0-5.0	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8,9-HpCDF	0.110U ng/Kg 0.0939U ng/Kg 0.0606U ng/Kg 0.336U ng/Kg 0.234U ng/Kg 0.322U ng/Kg 0.398U ng/Kg	A	B

SDG	Sample	Compound	Modified Final Concentration	A or P	Code
DX147	SL-254-SA6-SB-2.5-3.5	1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF OCDF	0.0424U ng/Kg 0.281U ng/Kg 0.172U ng/Kg 0.133U ng/Kg 0.0357U ng/Kg 0.198U ng/Kg 0.913U ng/Kg 0.0826U ng/Kg 1.19U ng/Kg	A	B

Santa Susana Field Laboratory
Dioxins/Dibenzofurans - Field Blank Data Qualification Summary - SDG DX147

No Sample Data Qualified in this SDG

LDC #: 26978A21 **VALIDATION COMPLETENESS WORKSHEET** Date: 1/24/12
SDG #: DX147 Level IV Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: EJ
2nd Reviewer: A

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/29/11
II.	HRGC/HRMS Instrument performance check	A	
III.	Initial calibration	A	%D RSD ≤ 20/35
IV.	Routine calibration/~~ICV~~	A	QC limits
V.	Blanks	SW	
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS
VIII.	Regional quality assurance and quality control	N	
IX.	Internal standards	A	
X.	Target compound identifications	A	
XI.	Compound quantitation and CRQLs	A	
XII.	System performance	A	
XIII.	Overall assessment of data	A	
XIV.	Field duplicates	SW	D = 2, 9
XV.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: SOILS

1	1	SL-001-SA8S-SS-0.0-0.5	11	1	SL-127-SA7-SB-4.0-5.0	21	1	SL-003-SA8S-SS-0.0-0.5MS	31	1	Blank 286001
2	1	SL-003-SA8S-SS-0.0-0.5 ✓	12	2	SL-177-SA7-SB-3.0-4.0	22	1	SL-003-SA8S-SS-0.0-0.5MSD	32		Blank 292003
3	1	SL-005-SA8S-SS-0.0-0.5	13	1	SL-229-SA6-SS-0.0-0.5	23			33		
4	1	SL-007-SA8S-SS-0.0-0.5	14	2	SL-230-SA6-SS-0.0-0.5	24			34		
5	1	SL-013-SA8S-SS-0.0-0.5	15	2	SL-234-SA6-SS-0.0-0.5	25			35		
6	1	SL-014-SA8S-SS-0.0-0.5	16	2	SL-232-SA6-SS-0.0-0.5	26			36		
7	2	SL-015-SA8S-SS-0.0-0.5	17	2	SL-232-SA6-SB-2.5-3.5	27			37		
8	2	SL-024-SA8S-SS-0.0-0.5	18	2	SL-229-SA6-SB-2.0-3.0	28			38		
9	1	DUP01-SA8S-QC-092911 ✓	19	2	SL-230-SA6-SB-4.0-5.0	29			39		
10	1	SL-126-SA7-SB-4.0-5.0	20	2	SL-254-SA6-SB-2.5-3.5	30			40		

Notes: _____

LDC #: 26978A21

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Method: Dioxins/Dibenzofurans (EPA SW 846 Method 1613B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Was PFK exact mass 380.9760 verified?	✓			
Were the retention time windows established for all homologues?	✓			
Was the chromatographic resolution between 2,3,7,8-TCDD and peaks representing any other unlabeled TCDD isomers ≤ 25% ?	✓			
Is the static resolving power at least 10,000 (10% valley definition)?	✓			
Was the mass resolution adequately check with PFK?	✓			
Was the presence of 1,2,8,9-TCDD and 1,3,4,6,8-PeCDF verified?	✓			
III. Initial calibration				
Was the initial calibration performed at 5 concentration levels?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20% for unlabeled compounds and ≤ 35% for labeled compounds ?	✓			
Did all calibration standards meet the Ion Abundance Ratio criteria?	✓			
Was the signal to noise ratio for each target compound ≥ 2.5 and for each recovery and internal standard ≥ 10?	✓			
IV. Continuing calibration				
Was a routine calibration performed at the beginning and end of each 12 hour period?	✓			
Were all the concentrations for the unlabeled compounds and labeled compounds within the QC limits (Method 1613B, Table 6)?	✓			
Did all routine calibration standards meet the Ion Abundance Ratio criteria?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank performed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet?	✓			
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			

LDC #: 26978A2 1

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
VIII. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
IX. Internal standards				
Were internal standard recoveries within the ~~25-150%~~ 6 Limits criteria?	✓			
Was the minimum S/N ratio of all internal standard peaks ≥ 10?	✓			
X. Target compound identification				
For 2,3,7,8 substituted congeners with associated labeled standards, were the retention times of the two quantitation peaks within -1 to 3 sec. of the RT of the labeled standard?	✓			
For 2,3,7,8 substituted congeners without associated labeled standards, were the relative retention times of the two quantitation peaks within 0.005 time units of the RRT measured in the routine calibration?	✓			
For non-2,3,7,8 substituted congeners, were the retention times of the two quantitation peaks within RT established in the performance check solution?	✓			
Did compound spectra contain all characteristic ions listed in the table attached?	✓			
Was the Ion Abundance Ratio for the two quantitation ions within criteria?	✓			
Was the signal to noise ratio for each target compound and labeled standard ≥ 2.5?	✓			
Does the maximum intensity of each specified characteristic ion coincide within ± 2 seconds (includes labeled standards)?	✓			
For PCDF identification, was any signal (S/N ≥ 2.5, at ± seconds RT) detected in the corresponding PCDPE channel?		✓		
Was an acceptable lock mass recorded and monitored?	✓			
XI. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

VALIDATION FINDINGS WORKSHEET

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

A. 2,3,7,8-TCDD	F. 1,2,3,4,6,7,8-HpCDD	K. 1,2,3,4,7,8-HxCDF	P. 1,2,3,4,7,8,9-HpCDF	U. Total HpCDD
B. 1,2,3,7,8-PeCDD	G. OCDD	L. 1,2,3,6,7,8-HxCDF	Q. OCDF	V. Total TCDF
C. 1,2,3,4,7,8-HxCDD	H. 2,3,7,8-TCDF	M. 2,3,4,6,7,8-HxCDF	R. Total TCDD	W. Total PeCDF
D. 1,2,3,6,7,8-HxCDD	I. 1,2,3,7,8-PeCDF	N. 1,2,3,7,8,9-HxCDF	S. Total PeCDD	X. Total HxCDF
E. 1,2,3,7,8,9-HxCDD	J. 2,3,4,7,8-PeCDF	O. 1,2,3,4,6,7,8-HpCDF	T. Total HxCDD	Y. Total HpCDF

Notes:

LDC #: 26978A21

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: EF
2nd Reviewer: [illegible]

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were all samples associated with a method blank?
Y N N/A Was a method blank performed for each matrix and whenever a sample extraction was performed?
Y N N/A Was the method blank contaminated?

(b)

Blank extraction date: 10/13/11 **Blank analysis date:** 10/15/11 **Associated samples:** 1-6, 9-11, 13I

Conc. units: ng/Kg

Compound	Blank ID		Sample Identification									
	BLK286001	5X	1	2	3	4	5	6	9	10	11	13
H	0.0391	0.1955	0.179			0.0545	0.183	0.0992				0.184*
A	0.0626*	0.313										0.151*
I	0.0281	0.1405	0.0941*		0.0389				0.0763	0.0429	0.0254*	
J	0.0553*	0.2765			0.0720*	0.0428*			0.233	0.0412	0.0610*	
L	0.0263*	0.1315		0.113*	0.0340	0.0674					0.0482*	
M	0.0606*	0.303	0.203	0.150	0.0512	0.0823*		0.184	0.149	0.0159	0.0396	
D	0.0344*	0.172	0.152	0.165	0.0811*	0.119				0.124	0.0346	
E	0.0271*	0.1355	0.125		0.0560	0.118*					0.0636*	
N	0.0293	0.1465	0.0547*		0.0374*	0.0505*			0.0609		0.0500*	
O	0.0913	0.4565			0.151					0.0901*	0.163	
F	0.202	1.01			0.781					0.211*	0.284	
P	0.0260*	0.13	0.118*	0.0457	0.0559	0.0508		0.0761*	0.0624*	0.0193	0.0235*	
G	0.380	1.9								0.577	0.862	
Q	0.189	0.945		0.882	0.353	0.884				0.124*	0.230	
		0										
		0										
		0										

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the method blank concentration were qualified as not detected, "U".

LDC #: ~~26064A21~~ 26978A21

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: PD
2nd Reviewer: A

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were all samples associated with a method blank?

Y N N/A Was a method blank performed for each matrix and whenever a sample extraction was performed?

Y N N/A Was the method blank contaminated?

(b)

Blank extraction date: 10/19/11 **Blank analysis date:** 10/20/11 **Associated samples:** 7,8,12, 14-20

Conc. units: ng/Kg

Compound	Blank ID	Sample Identification								
	BLK292003	5X	7	8	12	15	16	17	19	20
I	0.0392*	0.196	0.0687U	0.190U	0.0291*U		0.0936U	0.121*U	0.110*U	
J	0.0693	0.3465	0.220*U	0.0436*U			0.209U	0.0960U	0.0939*U	
B	0.0488*	0.244	0.0439U	0.0493U	0.0346*U	0.202U	0.104*U		0.0606*U	0.0424U
K	0.114	0.57	0.189*U	0.179*U	0.0413*U	0.386*U	0.158*U	0.106*U	0.336U	0.281*U
L	0.0822*	0.411	0.129*U	0.138U	0.0191*U	0.369U	0.103*U	0.0607U	0.234*U	0.172*U
M	0.0874*	0.437	0.178U	0.190*U	0.0511*U		0.175U	0.0858U	0.322U	0.133U
C	0.0310	0.155	0.0940*U	0.137*U			0.129*U	0.0832*U		0.0357*U
D	0.0294*	0.147			0.0551*U			0.0730U		
E	0.0415*	0.2075	0.0999U	0.183*U	0.0930*U			0.0963U		0.198*U
O	0.370*	1.85	0.862U	0.772U	0.135*U		1.18U	0.175*U		0.913U
F	0.305*	1.525			0.339*U			0.308*U		
P	0.0805	0.4025	0.108U	0.0874*U	0.0411*U	0.338U	0.131*U	0.0271*U	0.398*U	0.0826U
G	0.653	3.265			1.15*U			1.23U		
Q	0.256	1.28	0.875U	1.26U	0.179*U			0.213U		1.19U

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the method blank concentration were qualified as not detected, "U".

LDC#: 26978A21 **VALIDATION FINDINGS WORKSHEET**
Field Duplicates

Page: 1 of 1
Reviewer: F
2nd Reviewer: A APL

METHOD: Method 1613B
Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

(fd

Compound	Concentration (ng/kg)		(≤30) RPD	
	2	9		
B	0.0765	0.0846*	10	
C	0.0692*	0.0704*	2	
D	0.165	0.193	16	
E	0.163*	0.138	17	
F	2.71	3.04	11	
G	18.7	27.5	38	
H	0.196	0.265	30	
I	5.09 u ~~0.0217U~~	0.0763	200 ~~111*~~	~~J~~ J/UJ/A
J	0.317	0.233	31	A
K	0.220	0.361	49	
L	0.113*	0.148	27	
N	5.09 u ~~0.0252U~~	0.0609	200	J/UJ/A
M	0.150	0.149	1	
O	0.574	0.615*	7	
P	0.0457	0.0624*	31	
Q	0.882	1.0	13	

LDC #: 26928A2/

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of
Reviewer: FT
2nd Reviewer: A

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
$\%RSD = 100 * (S/X)$

A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard
S = Standard deviation of the RRFs, X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported RRF (CS3 std)	Recalculated RRF (CS3 std)	Reported %RSD	Recalculated %RSD
1	ICAL	6/24/11	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	1.022	1.022	1.028	1.028	7.7	7.7
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.133	1.133	1.142	1.142	3.52	3.52
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	0.971	0.971	1.018	1.018	4.32	4.32
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	1.053	1.053	1.087	1.087	4.49	4.49
			OCDF (^{13}C-OCDF)	0.950	0.952	1.001	1.001	5.01	5.01
2			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)						
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)						
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)						
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)						
			OCDF (^{13}C-OCDF)						
3			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)						
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)						
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)						
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)						
			OCDF (^{13}C-OCDF)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26978A21

VALIDATION FINDINGS WORKSHEET
Routine Calibration Results Verification

Reviewer: FT
2nd Reviewer: A

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compound identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF conc (CC)	Recalculated RRF conc (CC)	Reported %D	Recalculated %D
1	CCV 3:46	10/15/11	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	1.022	9.590	9.590		
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.133	10.070	10.070		
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	0.971	49.150	49.150		
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	1.053	49.320	49.320		
			OCDF (^{13}C-OCDF)	0.950	98.970	98.970		
2	CCV 16:15	10/15/11	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)		9.570	9.570		
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)		10.370	10.370		
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)		50.980	50.980		
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)		49.220	49.220		
			OCDF (^{13}C-OCDF)		100.270	100.270		
3	CCV 0049	10/18/11	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)		9.620	9.620		
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)		10.380	10.380		
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)		50.620	50.620		
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)		49.800	49.800		
			OCDF (^{13}C-OCDF)		100.970	100.970		

Comments: Refer to Routine Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results

LDC #: 26978A21

VALIDATION FINDINGS WORKSHEET
Routine Calibration Results Verification

Reviewer: FT
2nd Reviewer:

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compound identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV 13:24	10/20/11	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	1.022	9.890	9.890		
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.133	10.040	10.040		
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	0.971	51.230	51.230		
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	1.053	50.540	50.540		
			OCDF (^{13}C-OCDF)	0.950	101.220	101.220		
2	CCV 01:13	10/21/11	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)		9.920	9.920		
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)		10.190	10.190		
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)		51.650	51.650		
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)		50.720	50.720		
			OCDF (^{13}C-OCDF)		101.730	101.730		
3			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)					
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)					
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)					
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)					
			OCDF (^{13}C-OCDF)					

Comments: Refer to Routine Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26978A21

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer: A

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA SW 846 Method 1613B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSR - SR)/SA Where: SSR = Spiked sample result, SR = Sample result
SA = Spike added

RPD = | MSR - MSDR | * 2/(MSR + MSDR) MSR = Matrix spike percent recovery MSDR = Matrix spike duplicate percent recovery

MS/MSD samples: 21 + 22

Compound	Spike Added (ng/kg)		Sample Concentration (ng/kg)	Spiked Sample Concentration (ng/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		Reported RPD	Recalculated RPD
	MS	MSD	-----	MS	MSD	Reported	Recalc	Reported	Recalc	---	---
2,3,7,8-TCDD	20.2	20.2	0.196	20.8	20.0	102	102	98	98	4	4
1,2,3,7,8-PeCDD	101	101	0.0765	104	104	103	103	103	103	1	1
1,2,3,4,7,8-HxCDD	101	101	0.0692	105	103	104	104	102	102	2	2
1,2,3,4,7,8,9-HpCDF	101	101	0.0457	101	99.5	100	100	99	99	1	1
OCDF	202	202	0.882	207	201	102	102	99	99	3	3

Comments: Refer to Matrix Spike/Matrix Spike Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26978A21

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Page: 1 of 1
Reviewer: FT
2nd Reviewer:

METHOD: GC/MS Dioxins/Dibenzofurans (EPA SW 846 Method 1613B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = | LCS - LCSD | * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: OPR286001

Compound	Spike Added (ng/kg)		Spiked Sample Concentration (ng/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
2,3,7,8-TCDD	20.0	NA	20.8	NA	104	104				
1,2,3,7,8-PeCDD	100.0		102		102	102				
1,2,3,4,7,8-HxCDD	100.0		103		103	103				
1,2,3,4,7,8,9-HpCDF	100		98.5		98	98				
OCDF	200		198		99	99	NA			

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 26978A2 / **VALIDATION FINDINGS WORKSHEET**
Sample Calculation Verification

Page: 1 of 1
Reviewer: F7
2nd reviewer: A

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

V_o = Volume or weight of sample extract in milliliters (ml) or grams (g).

RRF = Relative Response Factor (average) from the initial calibration

Df = Dilution Factor.

%S = Percent solids, applicable to soil and solid matrices only.

Example:

Sample I.D. #1 , OCDD :

Conc. = ( ) ( ) ( ) / ( ) ( ) ( ) ( )

= 19.3 ng/kg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification
	OCDD =	$\frac{(5013.7 + 46357)(4000)}{(1071590 + 954322)(1.041)(10.04)(0.943)}$			
		= 19.3 ng/kg			

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SAMPLE DELIVERY GROUP

DE148

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
11-May-2011	TB-051111	6285041	TB	5030B	8015M	III
11-May-2011	TB-051111	6285041	TB	5030B	8260B	III
11-May-2011	TB-051111	6285041	TB	5030B	8260B SIM	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0	6285036	N	3050B	6010B	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0	6285036	N	3050B	6020	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0	6285036	N	3060A	7199	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0	6285036	N	3546	1625C	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0	6285036	N	3550B	8015B	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0	6285036	N	3550B	8015M	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0	6285036	N	3550B	8082	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0	6285036	N	3550B	8270C	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0	6285036	N	3550B	8270C SIM	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0	6285036	N	5035	8015M	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0	6285036	N	5035	8260B	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0	6285036	N	5035	8260B SIM	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0	6285036	N	8330	8330A	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0	6285036	N	METHOD	300.0	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0	6285036	N	METHOD	314.0	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0	6285036	N	METHOD	6850	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0	6285036	N	METHOD	7471A	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0	6285036	N	METHOD	8015B	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0	6285036	N	METHOD	8015M	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0	6285036	N	METHOD	8315A	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0	6285036	N	METHOD	9012B	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0DUP	P285036D220654	DUP	METHOD	7471A	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0DUP	P285036D220920A	DUP	3050B	6020	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
11-May-2011	SL-120-SA8N-SB-4.0-5.0DUP	P285036D220920B	DUP	3050B	6020	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0DUP	P285036D220920C	DUP	3050B	6020	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0DUP	P285036D220920D	DUP	3050B	6020	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0DUP	P285036D221316	DUP	3050B	6010B	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0DUP	P285036D271652A	DUP	METHOD	314.0	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0MSD	P285036M220657	MSD	METHOD	7471A	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0MSD	P285036M220926A	MSD	3050B	6020	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0MSD	P285036M220926B	MSD	3050B	6020	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0MSD	P285036M220926C	MSD	3050B	6020	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0MSD	P285036M220926D	MSD	3050B	6020	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0MSD	P285036M221324	MSD	3050B	6010B	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0MSD	P285036M240124A	MSD	3550B	8082	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0MSD	P285036M241828A	MSD	METHOD	6850	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0MSD	P285036M321659A	MSD	3550B	8015M	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0MSD	P285036M322030A	MSD	METHOD	8015M	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0MS	P285036R220656	MS	METHOD	7471A	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0MS	P285036R220923A	MS	3050B	6020	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0MS	P285036R220923B	MS	3050B	6020	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0MS	P285036R220923C	MS	3050B	6020	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0MS	P285036R220923D	MS	3050B	6020	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0MS	P285036R221320	MS	3050B	6010B	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0MS	P285036R240105A	MS	3550B	8082	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0MS	P285036R241821A	MS	METHOD	6850	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0MS	P285036R272311A	MS	METHOD	314.0	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0MS	P285036R321634A	MS	3550B	8015M	III
11-May-2011	SL-120-SA8N-SB-4.0-5.0MS	P285036R322017A	MS	METHOD	8015M	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
11-May-2011	SL-120-SA8N-SB-9.0-10.0	6285037	N	3050B	6010B	III
11-May-2011	SL-120-SA8N-SB-9.0-10.0	6285037	N	3050B	6020	III
11-May-2011	SL-120-SA8N-SB-9.0-10.0	6285037	N	3060A	7199	III
11-May-2011	SL-120-SA8N-SB-9.0-10.0	6285037	N	3546	1625C	III
11-May-2011	SL-120-SA8N-SB-9.0-10.0	6285037	N	3550B	8015B	III
11-May-2011	SL-120-SA8N-SB-9.0-10.0	6285037	N	3550B	8015M	III
11-May-2011	SL-120-SA8N-SB-9.0-10.0	6285037	N	3550B	8082	III
11-May-2011	SL-120-SA8N-SB-9.0-10.0	6285037	N	3550B	8270C	III
11-May-2011	SL-120-SA8N-SB-9.0-10.0	6285037	N	3550B	8270C SIM	III
11-May-2011	SL-120-SA8N-SB-9.0-10.0	6285037	N	5035	8015M	III
11-May-2011	SL-120-SA8N-SB-9.0-10.0	6285037	N	5035	8260B	III
11-May-2011	SL-120-SA8N-SB-9.0-10.0	6285037	N	5035	8260B SIM	III
11-May-2011	SL-120-SA8N-SB-9.0-10.0	6285037	N	8330	8330A	III
11-May-2011	SL-120-SA8N-SB-9.0-10.0	6285037	N	METHOD	300.0	III
11-May-2011	SL-120-SA8N-SB-9.0-10.0	6285037	N	METHOD	314.0	III
11-May-2011	SL-120-SA8N-SB-9.0-10.0	6285037	N	METHOD	7471A	III
11-May-2011	SL-120-SA8N-SB-9.0-10.0	6285037	N	METHOD	8015B	III
11-May-2011	SL-120-SA8N-SB-9.0-10.0	6285037	N	METHOD	8015M	III
11-May-2011	SL-120-SA8N-SB-9.0-10.0	6285037	N	METHOD	8315A	III
11-May-2011	SL-120-SA8N-SB-9.0-10.0	6285037	N	METHOD	9012B	III
11-May-2011	SL-136-SA8N-SB-4.0-5.0	6285038	N	3050B	6010B	III
11-May-2011	SL-136-SA8N-SB-4.0-5.0	6285038	N	3050B	6020	III
11-May-2011	SL-136-SA8N-SB-4.0-5.0	6285038	N	3060A	7199	III
11-May-2011	SL-136-SA8N-SB-4.0-5.0	6285038	N	3550B	8082	III
11-May-2011	SL-136-SA8N-SB-4.0-5.0	6285038	N	3550B	8270C	III
11-May-2011	SL-136-SA8N-SB-4.0-5.0	6285038	N	3550B	8270C SIM	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
11-May-2011	SL-136-SA8N-SB-4.0-5.0	6285038	N	5035	8260B	III
11-May-2011	SL-136-SA8N-SB-4.0-5.0	6285038	N	5035	8260B SIM	III
11-May-2011	SL-136-SA8N-SB-4.0-5.0	6285038	N	METHOD	300.0	III
11-May-2011	SL-136-SA8N-SB-4.0-5.0	6285038	N	METHOD	314.0	III
11-May-2011	SL-136-SA8N-SB-4.0-5.0	6285038	N	METHOD	7471A	III
11-May-2011	SL-136-SA8N-SB-9.0-10.0	6285039	N	3050B	6010B	III
11-May-2011	SL-136-SA8N-SB-9.0-10.0	6285039	N	3050B	6020	III
11-May-2011	SL-136-SA8N-SB-9.0-10.0	6285039	N	3060A	7199	III
11-May-2011	SL-136-SA8N-SB-9.0-10.0	6285039	N	3550B	8082	III
11-May-2011	SL-136-SA8N-SB-9.0-10.0	6285039	N	3550B	8270C	III
11-May-2011	SL-136-SA8N-SB-9.0-10.0	6285039	N	3550B	8270C SIM	III
11-May-2011	SL-136-SA8N-SB-9.0-10.0	6285039	N	METHOD	300.0	III
11-May-2011	SL-136-SA8N-SB-9.0-10.0	6285039	N	METHOD	314.0	III
11-May-2011	SL-136-SA8N-SB-9.0-10.0	6285039	N	METHOD	7471A	III
11-May-2011	EB10-SA8N-SB-051111	6285040	EB	3510C	8015B	III
11-May-2011	EB10-SA8N-SB-051111	6285040	EB	3510C	8015M	III
11-May-2011	EB10-SA8N-SB-051111	6285040	EB	3520C	1625C	III
11-May-2011	EB10-SA8N-SB-051111	6285040	EB	5030B	8015M	III
11-May-2011	EB10-SA8N-SB-051111	6285040	EB	8330	8330A	III
11-May-2011	EB10-SA8N-SB-051111	6285040	EB	Gen Prep	300.0	III
11-May-2011	EB10-SA8N-SB-051111	6285040	EB	Gen Prep	8015B	III
11-May-2011	EB10-SA8N-SB-051111	6285040	EB	Gen Prep	8015M	III
11-May-2011	EB10-SA8N-SB-051111	6285040	EB	METHOD	8315A	III
11-May-2011	EB10-SA8N-SB-051111	6285040	EB	METHOD	9012B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE148 **Laboratory: LL**

EDD Filename: DE148_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: GENCHEM

Method: 300.0 **Matrix: SO**

Sample ID: SL-120-SA8N-SB-4.0-5.0 *Collected:* 5/11/2011 8:47:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate-NO3	1.3	J	0.87	MDL	1.6	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-120-SA8N-SB-4.0-5.0 *Collected:* 5/11/2011 8:47:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	3940		6.60	MDL	21.5	PQL	mg/Kg	J	E
PHOSPHORUS	277		0.603	MDL	10.8	PQL	mg/Kg	J	Q, E
POTASSIUM	2310		19.4	MDL	53.8	PQL	mg/Kg	J	Q
SODIUM	84.4	J	40.1	MDL	108	PQL	mg/Kg	J	Z
TIN	2.81	J	1.08	MDL	10.8	PQL	mg/Kg	U	B
Zirconium	1.06	J	0.904	MDL	5.38	PQL	mg/Kg	J	Z

Sample ID: SL-120-SA8N-SB-9.0-10.0 *Collected:* 5/11/2011 8:49:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	4710		6.86	MDL	22.4	PQL	mg/Kg	J	E
PHOSPHORUS	227		0.626	MDL	11.2	PQL	mg/Kg	J	Q, E
POTASSIUM	2480		20.1	MDL	55.9	PQL	mg/Kg	J	Q
TIN	2.88	J	1.12	MDL	11.2	PQL	mg/Kg	U	B
Zirconium	2.15	J	0.940	MDL	5.59	PQL	mg/Kg	J	Z

Sample ID: SL-136-SA8N-SB-4.0-5.0 *Collected:* 5/11/2011 9:59:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	5730		6.51	MDL	21.2	PQL	mg/Kg	J	E
PHOSPHORUS	342		0.595	MDL	10.6	PQL	mg/Kg	J	Q, E
POTASSIUM	3240		19.1	MDL	53.1	PQL	mg/Kg	J	Q
SODIUM	89.1	J	39.6	MDL	106	PQL	mg/Kg	J	Z
TIN	2.81	J	1.06	MDL	10.6	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE148 **Laboratory: LL**

EDD Filename: DE148_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-136-SA8N-SB-9.0-10.0 *Collected:* 5/11/2011 10:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	1690		6.40	MDL	20.9	PQL	mg/Kg	J	E
PHOSPHORUS	163		0.585	MDL	10.4	PQL	mg/Kg	J	Q, E
POTASSIUM	1940		18.8	MDL	52.2	PQL	mg/Kg	J	Q
TIN	2.62	J	1.04	MDL	10.4	PQL	mg/Kg	U	B
Zirconium	0.930	J	0.877	MDL	5.22	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-120-SA8N-SB-4.0-5.0 *Collected:* 5/11/2011 8:47:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.160	J	0.0426	MDL	0.426	PQL	mg/Kg	J	Z

Sample ID: SL-120-SA8N-SB-4.0-5.0 *Collected:* 5/11/2011 8:47:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.185	J	0.0639	MDL	0.213	PQL	mg/Kg	J	Z, Q, E
ARSENIC	4.45		0.0853	MDL	0.426	PQL	mg/Kg	J	Q
BERYLLIUM	0.630		0.0171	MDL	0.107	PQL	mg/Kg	J	Q
CADMIUM	0.251		0.0426	MDL	0.107	PQL	mg/Kg	J	Q
CHROMIUM	20.5		0.128	MDL	0.426	PQL	mg/Kg	J	Q
COBALT	7.36		0.0213	MDL	0.107	PQL	mg/Kg	J	Q
COPPER	12.5		0.0703	MDL	0.426	PQL	mg/Kg	J	Q
LEAD	14.1		0.0111	MDL	0.213	PQL	mg/Kg	J	E
NICKEL	14.0		0.107	MDL	0.426	PQL	mg/Kg	J	Q
SILVER	0.0374	J	0.0128	MDL	0.107	PQL	mg/Kg	J	Z, Q
THALLIUM	0.299		0.0320	MDL	0.107	PQL	mg/Kg	J	Q
VANADIUM	36.7		0.0234	MDL	0.107	PQL	mg/Kg	J	Q

Sample ID: SL-120-SA8N-SB-9.0-10.0 *Collected:* 5/11/2011 8:49:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.113	J	0.0443	MDL	0.443	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE148 **Laboratory:** LL

EDD Filename: DE148_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-120-SA8N-SB-9.0-10.0 *Collected:* 5/11/2011 8:49:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.127	J	0.0665	MDL	0.222	PQL	mg/Kg	J	Z, Q, E
ARSENIC	5.32		0.0886	MDL	0.443	PQL	mg/Kg	J	Q
BERYLLIUM	0.630		0.0177	MDL	0.111	PQL	mg/Kg	J	Q
CADMIUM	0.0959	J	0.0443	MDL	0.111	PQL	mg/Kg	J	Z, Q
CHROMIUM	19.4		0.133	MDL	0.443	PQL	mg/Kg	J	Q
COBALT	6.22		0.0222	MDL	0.111	PQL	mg/Kg	J	Q
COPPER	9.29		0.0731	MDL	0.443	PQL	mg/Kg	J	Q
LEAD	7.47		0.0115	MDL	0.222	PQL	mg/Kg	J	E
NICKEL	12.1		0.111	MDL	0.443	PQL	mg/Kg	J	Q
SILVER	0.0466	J	0.0133	MDL	0.111	PQL	mg/Kg	J	Z, Q
THALLIUM	0.238		0.0332	MDL	0.111	PQL	mg/Kg	J	Q
VANADIUM	38.0		0.0244	MDL	0.111	PQL	mg/Kg	J	Q

Sample ID: SL-136-SA8N-SB-4.0-5.0 *Collected:* 5/11/2011 9:59:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.133	J	0.0429	MDL	0.429	PQL	mg/Kg	J	Z

Sample ID: SL-136-SA8N-SB-4.0-5.0 *Collected:* 5/11/2011 9:59:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0644	U	0.0644	MDL	0.215	PQL	mg/Kg	UJ	Q, E
ARSENIC	2.54		0.0858	MDL	0.429	PQL	mg/Kg	J	Q
BERYLLIUM	0.321		0.0172	MDL	0.107	PQL	mg/Kg	J	Q
CADMIUM	0.0808	J	0.0429	MDL	0.107	PQL	mg/Kg	J	Z, Q
CHROMIUM	8.73		0.129	MDL	0.429	PQL	mg/Kg	J	Q
COBALT	3.65		0.0215	MDL	0.107	PQL	mg/Kg	J	Q
COPPER	3.91		0.0708	MDL	0.429	PQL	mg/Kg	J	Q
LEAD	10.8		0.0112	MDL	0.215	PQL	mg/Kg	J	E
NICKEL	5.73		0.107	MDL	0.429	PQL	mg/Kg	J	Q
THALLIUM	0.220		0.0322	MDL	0.107	PQL	mg/Kg	J	Q
VANADIUM	21.1		0.0236	MDL	0.107	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE148 **Laboratory: LL**

EDD Filename: DE148_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-136-SA8N-SB-9.0-10.0 *Collected:* 5/11/2011 10:10:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.144	J	0.0409	MDL	0.409	PQL	mg/Kg	J	Z

Sample ID: SL-136-SA8N-SB-9.0-10.0 *Collected:* 5/11/2011 10:10:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.129	J	0.0614	MDL	0.205	PQL	mg/Kg	J	Z, Q, E
ARSENIC	5.84		0.0819	MDL	0.409	PQL	mg/Kg	J	Q
BERYLLIUM	0.767		0.0164	MDL	0.102	PQL	mg/Kg	J	Q
CADMIUM	0.0588	J	0.0409	MDL	0.102	PQL	mg/Kg	J	Z, Q
CHROMIUM	18.4		0.123	MDL	0.409	PQL	mg/Kg	J	Q
COBALT	8.03		0.0205	MDL	0.102	PQL	mg/Kg	J	Q
COPPER	6.72		0.0675	MDL	0.409	PQL	mg/Kg	J	Q
LEAD	6.93		0.0106	MDL	0.205	PQL	mg/Kg	J	E
NICKEL	11.1		0.102	MDL	0.409	PQL	mg/Kg	J	Q
SILVER	0.0435	J	0.0123	MDL	0.102	PQL	mg/Kg	J	Z, Q
THALLIUM	0.310		0.0307	MDL	0.102	PQL	mg/Kg	J	Q
VANADIUM	40.5		0.0225	MDL	0.102	PQL	mg/Kg	J	Q

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: SL-120-SA8N-SB-4.0-5.0 *Collected:* 5/11/2011 8:47:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.33	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-120-SA8N-SB-9.0-10.0 *Collected:* 5/11/2011 8:49:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.42	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE148 Laboratory: LL

EDD Filename: DE148_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA **Method:** 1625C **Matrix:** AQ

Sample ID: EB10-SA8N-SB-051111 *Collected:* 5/11/2011 12:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	0.765	J	0.519	MDL	1.04	PQL	ng/L	J	Z, S

Method Category: SVOA **Method:** 1625C **Matrix:** SO

Sample ID: SL-120-SA8N-SB-4.0-5.0 *Collected:* 5/11/2011 8:47:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	34.5	J	18.0	MDL	36.0	PQL	ng/Kg	J	Z

Method Category: SVOA **Method:** 6850 **Matrix:** SO

Sample ID: SL-120-SA8N-SB-4.0-5.0 *Collected:* 5/11/2011 8:47:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	3.1	J	2.3	MDL	5.4	PQL	ug/Kg	J	Z

Method Category: SVOA **Method:** 8015M **Matrix:** AQ

Sample ID: EB10-SA8N-SB-051111 *Collected:* 5/11/2011 12:30:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C8-C11)	0.14	J	0.11	MDL	0.65	PQL	mg/L	U	B

Method Category: SVOA **Method:** 8015M **Matrix:** SO

Sample ID: SL-120-SA8N-SB-4.0-5.0 *Collected:* 5/11/2011 8:47:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIETHYLENE GLYCOL	5.4	U	5.4	MDL	11	PQL	mg/Kg	UJ	Q
ETHYLENE GLYCOL	5.4	U	5.4	MDL	11	PQL	mg/Kg	UJ	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE148 Laboratory: LL

EDD Filename: DE148_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA
Method: 8015M **Matrix:** SO

Sample ID: SL-120-SA8N-SB-4.0-5.0 *Collected:* 5/11/2011 8:47:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C8-C11)	1.3	J	0.87	MDL	2.6	PQL	mg/Kg	UJ	Q, L, B

Sample ID: SL-120-SA8N-SB-9.0-10.0 *Collected:* 5/11/2011 8:49:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C8-C11)	1.3	J	0.92	MDL	2.7	PQL	mg/Kg	UJ	L, B

Method Category: SVOA
Method: 8082 **Matrix:** SO

Sample ID: SL-120-SA8N-SB-9.0-10.0 *Collected:* 5/11/2011 8:49:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	1.8	J	0.38	MDL	2.0	PQL	ug/Kg	J	Z
Aroclor 5460	3.0	J	1.2	MDL	3.8	PQL	ug/Kg	J	Z

Method Category: SVOA
Method: 8270C **Matrix:** SO

Sample ID: SL-120-SA8N-SB-4.0-5.0 *Collected:* 5/11/2011 8:47:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROBENZENE	90	U	90	MDL	900	PQL	ug/Kg	UJ	L
4-BROMOPHENYL-PHENYLETHER	90	U	90	MDL	900	PQL	ug/Kg	UJ	L

Sample ID: SL-120-SA8N-SB-9.0-10.0 *Collected:* 5/11/2011 8:49:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
4-BROMOPHENYL-PHENYLETHER	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	26	J	19	MDL	380	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE148 Laboratory: LL

EDD Filename: DE148_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-136-SA8N-SB-4.0-5.0 *Collected:* 5/11/2011 9:59:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROBENZENE	18	U	18	MDL	180	PQL	ug/Kg	UJ	L
4-BROMOPHENYL-PHENYLETHER	18	U	18	MDL	180	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	19	J	18	MDL	350	PQL	ug/Kg	J	Z

Sample ID: SL-136-SA8N-SB-9.0-10.0 *Collected:* 5/11/2011 10:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROBENZENE	17	U	17	MDL	170	PQL	ug/Kg	UJ	L
4-BROMOPHENYL-PHENYLETHER	17	U	17	MDL	170	PQL	ug/Kg	UJ	L

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: SL-120-SA8N-SB-4.0-5.0 *Collected:* 5/11/2011 8:47:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(G,H,I)PERYLENE	13	J	7.2	MDL	18	PQL	ug/Kg	J	Z
FLUORANTHENE	10	J	7.2	MDL	18	PQL	ug/Kg	J	Z
PYRENE	11	J	7.2	MDL	18	PQL	ug/Kg	J	Z

Sample ID: SL-120-SA8N-SB-9.0-10.0 *Collected:* 5/11/2011 8:49:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	0.90	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
CHRYSENE	1.1	J	0.38	MDL	1.9	PQL	ug/Kg	J	Z
Di-n-butylphthalate	7.3	J	6.9	MDL	21	PQL	ug/Kg	J	Z
FLUORANTHENE	1.3	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
PYRENE	1.1	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z

Sample ID: SL-136-SA8N-SB-4.0-5.0 *Collected:* 5/11/2011 9:59:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Di-n-butylphthalate	13	J	6.4	MDL	19	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE148 **Laboratory:** LL

EDD Filename: DE148_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: SL-136-SA8N-SB-9.0-10.0 *Collected:* 5/11/2011 10:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	8.4	J	6.2	MDL	19	PQL	ug/Kg	J	Z

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-120-SA8N-SB-9.0-10.0 *Collected:* 5/11/2011 8:49:00 *Analysis Type:* RES *Dilution:* 0.85

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOLUENE	0.08	J	0.08	MDL	3.9	PQL	ug/Kg	J	Z

Sample ID: SL-136-SA8N-SB-4.0-5.0 *Collected:* 5/11/2011 9:59:00 *Analysis Type:* RES *Dilution:* 0.92

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLOROFORM	0.13	J	0.12	MDL	3.9	PQL	ug/Kg	J	Z
TOLUENE	0.08	J	0.08	MDL	3.9	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE148 **Laboratory: LL**

EDD Filename: DE148_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Laboratory Triplicate Precision
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE148 **Laboratory: LL**

EDD Filename: DE148_v1 **eQAPP Name: CDM_SSFL_110509**

E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE148 **Laboratory: LL**

EDD Filename: DE148_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE148

Method Blank Outlier Report

Lab Reporting Batch ID: DE148 **Laboratory: LL**

EDD Filename: DE148_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P13908BB221256	5/20/2011 12:56:00 PM	PHOSPHORUS TIN	1.29 mg/Kg 1.65 mg/Kg	SL-120-SA8N-SB-4.0-5.0 SL-120-SA8N-SB-9.0-10.0 SL-136-SA8N-SB-4.0-5.0 SL-136-SA8N-SB-9.0-10.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-120-SA8N-SB-4.0-5.0(RES)	TIN	2.81 mg/Kg	2.81U mg/Kg
SL-120-SA8N-SB-9.0-10.0(RES)	TIN	2.88 mg/Kg	2.88U mg/Kg
SL-136-SA8N-SB-4.0-5.0(RES)	TIN	2.81 mg/Kg	2.81U mg/Kg
SL-136-SA8N-SB-9.0-10.0(RES)	TIN	2.62 mg/Kg	2.62U mg/Kg

Method: 8015M
Matrix: AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P36367AB321327A	5/18/2011 1:27:00 PM	EFH (C8-C11)	0.10 mg/L	EB10-SA8N-SB-051111

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
EB10-SA8N-SB-051111(REA2)	EFH (C8-C11)	0.14 mg/L	0.65U mg/L

Method: 8015M
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P37375AB321339A	5/25/2011 1:39:00 PM	EFH (C8-C11)	1.3 mg/Kg	SL-120-SA8N-SB-4.0-5.0 SL-120-SA8N-SB-9.0-10.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-120-SA8N-SB-4.0-5.0(REA2)	EFH (C8-C11)	1.3 mg/Kg	2.6U mg/Kg
SL-120-SA8N-SB-9.0-10.0(REA2)	EFH (C8-C11)	1.3 mg/Kg	2.7U mg/Kg

Method: 8260B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB57B210500A	5/17/2011 5:00:00 AM	METHYLENE CHLORIDE	0.55 ug/Kg	SL-120-SA8N-SB-4.0-5.0 SL-120-SA8N-SB-9.0-10.0 SL-136-SA8N-SB-4.0-5.0

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE148 **Laboratory: LL**

EDD Filename: DE148_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-120-SA8N-SB-4.0-5.0MSD (SL-120-SA8N-SB-4.0-5.0)	Propylene glycol	-	-	63.00-107.00	24 (20.00)	Propylene glycol	J (all detects)
SL-120-SA8N-SB-4.0-5.0MS SL-120-SA8N-SB-4.0-5.0MSD (SL-120-SA8N-SB-4.0-5.0)	DIETHYLENE GLYCOL ETHYLENE GLYCOL	43 58	56 -	59.00-109.00 63.00-107.00	27 (20.00) 26 (20.00)	DIETHYLENE GLYCOL ETHYLENE GLYCOL	J(all detects) UJ(all non-detects)
SL-120-SA8N-SB-4.0-5.0MS SL-120-SA8N-SB-4.0-5.0MSD (SL-120-SA8N-SB-4.0-5.0)	EFH (C21-C30)	492	249	49.00-123.00	30 (20.00)	EFH (C21-C30)	No Qual, >4x
SL-120-SA8N-SB-4.0-5.0MS SL-120-SA8N-SB-4.0-5.0MSD (SL-120-SA8N-SB-4.0-5.0)	EFH (C30-C40)	1306	-595	49.00-123.00	63 (20.00)	EFH (C30-C40)	No Qual, >4x
SL-120-SA8N-SB-4.0-5.0MSD (SL-120-SA8N-SB-4.0-5.0)	EFH (C8-C11)	-	36	49.00-123.00	-	EFH (C8-C11)	J(all detects) UJ(all non-detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-120-SA8N-SB-4.0-5.0MS SL-120-SA8N-SB-4.0-5.0MSD (SL-120-SA8N-SB-4.0-5.0 SL-120-SA8N-SB-9.0-10.0 SL-136-SA8N-SB-4.0-5.0 SL-136-SA8N-SB-9.0-10.0)	ARSENIC	165	213	75.00-125.00	-	ARSENIC	
	BERYLLIUM	126	142	75.00-125.00	-	BERYLLIUM	
	CADMIUM	126	130	75.00-125.00	-	CADMIUM	
	CHROMIUM	127	146	75.00-125.00	-	CHROMIUM	
	COBALT	-	146	75.00-125.00	-	COBALT	J(all detects)
	COPPER	-	150	75.00-125.00	-	COPPER	
	LEAD	238	330	75.00-125.00	-	LEAD	
	NICKEL	130	170	75.00-125.00	-	NICKEL	Pb, Zn,
	SILVER	-	131	75.00-125.00	-	SILVER	No Qual, >4x
	THALLIUM	-	129	75.00-125.00	-	THALLIUM	
	VANADIUM	157	209	75.00-125.00	-	VANADIUM	
	ZINC	150	268	75.00-125.00	-	ZINC	
SL-120-SA8N-SB-4.0-5.0MS SL-120-SA8N-SB-4.0-5.0MSD (SL-120-SA8N-SB-4.0-5.0 SL-120-SA8N-SB-9.0-10.0 SL-136-SA8N-SB-4.0-5.0 SL-136-SA8N-SB-9.0-10.0)	ANTIMONY	46	63	75.00-125.00	25 (20.00)	ANTIMONY	J(all detects) UJ(all non-detects)
SL-120-SA8N-SB-4.0-5.0MS SL-120-SA8N-SB-4.0-5.0MSD (SL-120-SA8N-SB-4.0-5.0 SL-120-SA8N-SB-9.0-10.0 SL-136-SA8N-SB-4.0-5.0 SL-136-SA8N-SB-9.0-10.0)	BARIUM	220	382	75.00-125.00	-	BARIUM	No Qual, >4x

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-120-SA8N-SB-4.0-5.0MS SL-120-SA8N-SB-4.0-5.0MSD (SL-120-SA8N-SB-4.0-5.0 SL-120-SA8N-SB-9.0-10.0 SL-136-SA8N-SB-4.0-5.0 SL-136-SA8N-SB-9.0-10.0)	ALUMINUM	2046	1418	75.00-125.00	-	ALUMINUM	
	IRON	1062	257	75.00-125.00	-	IRON	J(all detects)
	MAGNESIUM	338	199	75.00-125.00	-	MAGNESIUM	
	MANGANESE	169	-	75.00-125.00	-	MANGANESE	
	POTASSIUM	128	134	75.00-125.00	-	POTASSIUM	Al, Fe, Mg, Mn, Ti,
	TITANIUM	243	324	75.00-125.00	-	TITANIUM	No Qual, >4x

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE148 **Laboratory: LL**

EDD Filename: DE148_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-120-SA8N-SB-4.0-5.0MS SL-120-SA8N-SB-4.0-5.0MSD (SL-120-SA8N-SB-4.0-5.0 SL-120-SA8N-SB-9.0-10.0 SL-136-SA8N-SB-4.0-5.0 SL-136-SA8N-SB-9.0-10.0)	CALCIUM PHOSPHORUS	349 591	46 156	75.00-125.00 75.00-125.00	27 (20.00) 68 (20.00)	CALCIUM PHOSPHORUS	J(all detects) UJ(all non-detects) Ca, No Qual %R, >4x

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE148 Laboratory: LL

EDD Filename: DE148_v1 eQAPP Name: CDM_SSFL_110509

Method: 6010B
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-120-SA8N-SB-4.0-5.0DUP (SL-120-SA8N-SB-4.0-5.0 SL -120-SA8N-SB-9.0-10.0 SL -136-SA8N-SB-4.0-5.0 SL -136-SA8N-SB-9.0-10.0)	Zirconium	61	20.00	No Qual, OK by difference

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-120-SA8N-SB-4.0-5.0DUP (SL-120-SA8N-SB-4.0-5.0 SL -120-SA8N-SB-9.0-10.0 SL -136-SA8N-SB-4.0-5.0 SL -136-SA8N-SB-9.0-10.0)	CADMIUM	22	20.00	J(all detects) UJ(all non-detects)
	LEAD	22	20.00	
	SELENIUM	30	20.00	Cd, Se, Ag,Tl, No Qual, OK by difference
	SILVER	52	20.00	
	THALLIUM	21	20.00	

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE148 **Laboratory: LL**

EDD Filename: DE148_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8330A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11372AQ240134A (SL-120-SA8N-SB-4.0-5.0 SL-120-SA8N-SB-9.0-10.0)	PETN	121	-	80.00-120.00	-	PETN	J (all detects)

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11375AQ321405A (SL-120-SA8N-SB-4.0-5.0 SL-120-SA8N-SB-9.0-10.0)	EFH (C8-C11)	198	-	66.00-113.00	-	EFH (C8-C11)	J(all detects)

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P6LCLCSQ260838 (SL-120-SA8N-SB-4.0-5.0 SL-120-SA8N-SB-9.0-10.0 SL-136-SA8N-SB-4.0-5.0 SL-136-SA8N-SB-9.0-10.0)	1,2-DICHLOROBENZENE	75	-	79.00-102.00	-	1,2-DICHLOROBENZENE	J(all detects) UJ(all non-detects)
	4-BROMOPHENYL-PHENYLETH	78	-	79.00-117.00	-	4-BROMOPHENYL-PHENYLET	

Method: 8260B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCSB57Q210522A	N-BUTYLBENZENE	121	121	72.00-120.00	-	N-BUTYLBENZENE	J(all detects)
LCSB57Y210544A	N-PROPYLBENZENE	123	-	77.00-120.00	-	N-PROPYLBENZENE	
(SL-120-SA8N-SB-4.0-5.0 SL-120-SA8N-SB-9.0-10.0 SL-136-SA8N-SB-4.0-5.0)	SEC-BUTYLBENZENE	125	125	75.00-120.00	-	SEC-BUTYLBENZENE	

Surrogate Outlier Report

Lab Reporting Batch ID: DE148 **Laboratory: LL**

EDD Filename: DE148_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1625C**
Matrix: **AQ**

Sample ID	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
EB10-SA8N-SB-051111	N-Nitrosodimethylamine-d6	241	50.00-150.00	All Target Analytes	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE148 **Laboratory: LL**

EDD Filename: DE148_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1625C

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB10-SA8N-SB-051111	N-NITROSODIMETHYLAMINE	J	0.765	1.04	PQL	ng/L	J (all detects)

Method: 8015M

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB10-SA8N-SB-051111	EFH (C8-C11)	J	0.14	0.65	PQL	mg/L	J (all detects)

Method: 1625C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-120-SA8N-SB-4.0-5.0	N-NITROSODIMETHYLAMINE	J	34.5	36.0	PQL	ng/Kg	J (all detects)

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-120-SA8N-SB-4.0-5.0	Nitrate-NO3	J	1.3	1.6	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-120-SA8N-SB-4.0-5.0	SODIUM	J	84.4	108	PQL	mg/Kg	J (all detects)
	TIN	J	2.81	10.8	PQL	mg/Kg	
	Zirconium	J	1.06	5.38	PQL	mg/Kg	
SL-120-SA8N-SB-9.0-10.0	TIN	J	2.88	11.2	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.15	5.59	PQL	mg/Kg	
SL-136-SA8N-SB-4.0-5.0	SODIUM	J	89.1	106	PQL	mg/Kg	J (all detects)
	TIN	J	2.81	10.6	PQL	mg/Kg	
SL-136-SA8N-SB-9.0-10.0	TIN	J	2.62	10.4	PQL	mg/Kg	J (all detects)
	Zirconium	J	0.930	5.22	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-120-SA8N-SB-4.0-5.0	ANTIMONY	J	0.185	0.213	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.160	0.426	PQL	mg/Kg	
	SILVER	J	0.0374	0.107	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE148 **Laboratory: LL**

EDD Filename: DE148_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-120-SA8N-SB-9.0-10.0	ANTIMONY	J	0.127	0.222	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.0959	0.111	PQL	mg/Kg	
	SELENIUM	J	0.113	0.443	PQL	mg/Kg	
	SILVER	J	0.0466	0.111	PQL	mg/Kg	
SL-136-SA8N-SB-4.0-5.0	CADMIUM	J	0.0808	0.107	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.133	0.429	PQL	mg/Kg	
SL-136-SA8N-SB-9.0-10.0	ANTIMONY	J	0.129	0.205	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.0588	0.102	PQL	mg/Kg	
	SELENIUM	J	0.144	0.409	PQL	mg/Kg	
	SILVER	J	0.0435	0.102	PQL	mg/Kg	

Method: 6850

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-120-SA8N-SB-4.0-5.0	PERCHLORATE	J	3.1	5.4	PQL	ug/Kg	J (all detects)

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-120-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.33	1.1	PQL	mg/Kg	J (all detects)
SL-120-SA8N-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.42	1.2	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-120-SA8N-SB-4.0-5.0	EFH (C8-C11)	J	1.3	2.6	PQL	mg/Kg	J (all detects)
SL-120-SA8N-SB-9.0-10.0	EFH (C8-C11)	J	1.3	2.7	PQL	mg/Kg	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-120-SA8N-SB-9.0-10.0	AROCLOR 1254	J	1.8	2.0	PQL	ug/Kg	J (all detects)
	Aroclor 5460	J	3.0	3.8	PQL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE148 **Laboratory: LL**

EDD Filename: DE148_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-120-SA8N-SB-9.0-10.0	TOLUENE	J	0.08	3.9	PQL	ug/Kg	J (all detects)
SL-136-SA8N-SB-4.0-5.0	CHLOROFORM	J	0.13	3.9	PQL	ug/Kg	J (all detects)
	TOLUENE	J	0.08	3.9	PQL	ug/Kg	

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-120-SA8N-SB-9.0-10.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	26	380	PQL	ug/Kg	J (all detects)
SL-136-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	19	350	PQL	ug/Kg	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-120-SA8N-SB-4.0-5.0	BENZO(G,H,I)PERYLENE	J	13	18	PQL	ug/Kg	J (all detects)
	FLUORANTHENE	J	10	18	PQL	ug/Kg	
	PYRENE	J	11	18	PQL	ug/Kg	
SL-120-SA8N-SB-9.0-10.0	BENZO(A)PYRENE	J	0.90	1.9	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	1.1	1.9	PQL	ug/Kg	
	Di-n-butylphthalate	J	7.3	21	PQL	ug/Kg	
	FLUORANTHENE	J	1.3	1.9	PQL	ug/Kg	
	PYRENE	J	1.1	1.9	PQL	ug/Kg	
SL-136-SA8N-SB-4.0-5.0	Di-n-butylphthalate	J	13	19	PQL	ug/Kg	J (all detects)
SL-136-SA8N-SB-9.0-10.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	8.4	19	PQL	ug/Kg	J (all detects)

LDC #: 26277X4 **VALIDATION COMPLETENESS WORKSHEET** Date: 10/4/11
SDG #: DE148 ADR Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: W
2nd Reviewer:

METHOD: Metals (EPA SW 846 Method 6010B/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates:
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	A	Mn from RPD
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	SW	Al, Ba, Ca, Fe, Pb, Mg, Mn, Ti, Zn >4X; No gw Mn %R
VII.	Duplicate Sample Analysis	SW	Cd, Se, Ag, Tl, Zr <5X (Pb soil (D)
VIII.	Laboratory Control Samples (LCS)	A	SRM
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	SL-120-SA8N-SB-4.0-5.0	11	#1 MS	21		31	
2	SL-120-SA8N-SB-9.0-10.0	12	MSD	22		32	
3	SL-136-SA8N-SB-4.0-5.0	13	DUP	23		33	
4	SL-136-SA8N-SB-9.0-10.0	14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: DE148
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6285036BKG Matrix Spike Lab Sample ID: 6285036MS Matrix Spike Duplicate Lab Sample ID: 6285036MSD
% Solids for Sample: 92.0
Batch Id(s): P13908B, P13926A, P13911A

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	Control Limit RPD	M
Aluminum		15799.8138		20117.3301		18792.3966		211.0595	211.0595	MG/KG	2046		1418		7			20	P
Antimony	121	0.1846	B	0.7671		0.9872		1.2788	1.2788	MG/KG	46	N	63	N	25	*	75 - 125	20	MS
Arsenic	75	4.4459		7.9518		8.9855		2.1313	2.1313	MG/KG	164	N	213	N	12		75 - 125	20	MS
Barium	137	119.9275		143.3504		160.5925		10.6564	10.6564	MG/KG	220		382		11			20	MS
Beryllium	9	0.6302		1.7008		1.8412		0.8525	0.8525	MG/KG	126	N	142	N	8		75 - 125	20	MS
Boron		13.2899		221.1228		217.1929		211.0595	211.0595	MG/KG	98		97		2		84 - 115	20	P
Cadmium	111	0.2511		1.5948		1.6319		1.0656	1.0656	MG/KG	126	N	130	N	2		75 - 125	20	MS
Calcium		3941.6304		5415.2438		4135.2279		422.1190	422.1190	MG/KG	349		46		27	*		20	P
Chromium	52	20.4774		34.0153		35.9974		10.6564	10.6564	MG/KG	127	N	146	N	6		75 - 125	20	MS
Cobalt	59	7.3636		69.7144		85.3581		53.2822	53.2822	MG/KG	117		146	N	20		75 - 125	20	MS
Copper	63	12.5085		25.8738		28.4953		10.6564	10.6564	MG/KG	125		150	N	10		75 - 125	20	MS
Iron		21754.8407		22875.2881		22025.8917		105.5298	105.5298	MG/KG	1062		257		4			20	P
Lead	208	14.0772		21.6965		24.6164		3.1969	3.1969	MG/KG	238		330		13			20	MS
Lithium		18.9496		127.5338		125.6680		105.5298	105.5298	MG/KG	103		101		1		82 - 114	20	P
Magnesium		4471.1655		5184.1684		4890.8685		211.0595	211.0595	MG/KG	338		199		6			20	P
Manganese		254.0626		343.2049		317.8240		52.7649	52.7649	MG/KG	169		121		8			20	P
Mercury		0.0032	U	0.1458		0.1275		0.1755	0.1723	MG/KG	83		74		13		65 - 135	20	CV
Molybdenum	98	0.5684		12.6918		13.8704		10.6564	10.6564	MG/KG	114		125		9		75 - 125	20	MS
Nickel	60	14.0175		27.8772		32.1398		10.6564	10.6564	MG/KG	130	N	170	N	14		75 - 125	20	MS
Phosphorus		276.9770		901.0701		441.3719		105.5298	105.5298	MG/KG	591	N	156	N	68	*	75 - 125	20	P
Potassium		2315.0000		3666.0965		3727.1486		1055.2976	1055.2976	MG/KG	128	N	134	N	2		75 - 125	20	P
Selenium	78	0.1604	B	2.4744		2.6982		2.1313	2.1313	MG/KG	109		119		9		75 - 125	20	MS
Silver	107	0.0374	B	13.1223		14.0345		10.6564	10.6564	MG/KG	123		131	N	7		75 - 125	20	MS
Sodium		84.4404	B	1205.6807		1143.9384		1055.2976	1055.2976	MG/KG	106		100		5		75 - 125	20	P
Strontium		27.6507		131.5312		128.4455		105.5298	105.5298	MG/KG	98		96		2		75 - 115	20	P
Thallium	203	0.2992		0.7434		0.8497		0.4263	0.4263	MG/KG	104		129	N	13		75 - 125	20	MS
Tin		2.8099	B	380.8854		374.3732		422.1190	422.1190	MG/KG	90		88		2		80 - 110	20	P
Titanium		985.9029		1242.6098		1327.5253		105.5298	105.5298	MG/KG	243		324		7			20	P
Vanadium	51	36.6795		53.4101		58.9727		10.6564	10.6564	MG/KG	157	N	209	N	10		75 - 125	20	MS
Zinc	66	63.3845		79.3265		91.9864		10.6564	10.6564	MG/KG	150		268		15			20	MS
Zirconium		1.0622	B	104.0808		103.6176		105.5298	105.5298	MG/KG	98		97		0		75 - 125	20	P

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP/Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: DE148
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6285036BKG
% Solids for Duplicate: 92.0
Batch ID(s): P13908B, P13926A, P13911A
Concentration Units: MG/KG

Duplicate Lab Sample ID: 6285036DUP
% Solids for Sample: 92.0

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			15799.8138		14325.6217		10		P
Antimony	121		0.1846	B	0.1710	B	8		MS
Arsenic	75		4.4459		5.0211		12		MS
Barium	137		119.9275		106.5006		12		MS
Beryllium	9		0.6302		0.5692		10		MS
Boron		5.4	13.2899		11.9250		11		P
Cadmium	111	0.1	0.2511		0.2017		22		MS
Calcium			3941.6304		4161.1359		5		P
Chromium	52		20.4774		18.4276		11		MS
Cobalt	59		7.3636		8.0540		9		MS
Copper	63		12.5085		10.6965		16		MS
Iron			21754.8407		20229.8511		7		P
Lead	208		14.0772		11.2727		22	*	MS
Lithium			18.9496		16.8207		12		P
Magnesium			4471.1655		4148.6359		7		P
Manganese			254.0626		271.8098		7		P
Mercury			0.0032	U	0.0032	U			CV
Molybdenum	98		0.5684		0.5946		5		MS
Nickel	60		14.0175		12.3385		13		MS
Phosphorus			276.9770		277.8283		0		P
Potassium			2315.0000		2486.2707		7		P
Selenium	78		0.1604	B	0.1185	B	30		MS
Silver	107		0.0374	B	0.0634	B	52		MS
Sodium			84.4404	B	87.3457	B	3		P
Strontium			27.6507		24.8315		11		P
Thallium	203	0.1	0.2992		0.2415		21		MS
Tin			2.8099	B	2.5913	B	8		P
Titanium			985.9029		993.5674		1		P
Vanadium	51		36.6795		33.3052		10		MS
Zinc	66		63.3845		56.0363		12		MS
Zirconium			1.0622	B	2.0000	B	61		P

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	FLAGS:
AF = Cold Vapor Atomic Fluorescence	* = Duplicate Out of Spec

SAMPLE DELIVERY GROUP

DE149

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
12-May-2011	TB-051211	6286422	TB	5030B	8015M	III
12-May-2011	TB-051211	6286422	TB	5030B	8260B	III
12-May-2011	TB-051211	6286422	TB	5030B	8260B SIM	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0	6286419	N	3050B	6010B	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0	6286419	N	3050B	6020	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0	6286419	N	3060A	7199	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0	6286419	N	3546	1625C	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0	6286419	N	3550B	8015B	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0	6286419	N	3550B	8015M	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0	6286419	N	3550B	8082	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0	6286419	N	3550B	8270C	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0	6286419	N	3550B	8270C SIM	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0	6286419	N	5035	8015M	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0	6286419	N	5035	8260B	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0	6286419	N	5035	8260B SIM	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0	6286419	N	8330	8330A	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0	6286419	N	METHOD	300.0	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0	6286419	N	METHOD	314.0	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0	6286419	N	METHOD	7471A	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0	6286419	N	METHOD	8015B	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0	6286419	N	METHOD	8015M	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0	6286419	N	METHOD	8315A	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0	6286419	N	METHOD	9012B	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0MSD	P286419M322200A	MSD	METHOD	8015B	III
12-May-2011	SL-101-SA8N-SB-4.0-5.0MS	P286419R322145A	MS	METHOD	8015B	III
12-May-2011	SL-101-SA8N-SB-7.0-8.0	6286420	N	3050B	6010B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
12-May-2011	SL-101-SA8N-SB-7.0-8.0	6286420	N	3050B	6020	III
12-May-2011	SL-101-SA8N-SB-7.0-8.0	6286420	N	3060A	7199	III
12-May-2011	SL-101-SA8N-SB-7.0-8.0	6286420	N	3546	1625C	III
12-May-2011	SL-101-SA8N-SB-7.0-8.0	6286420	N	3550B	8015B	III
12-May-2011	SL-101-SA8N-SB-7.0-8.0	6286420	N	3550B	8015M	III
12-May-2011	SL-101-SA8N-SB-7.0-8.0	6286420	N	3550B	8082	III
12-May-2011	SL-101-SA8N-SB-7.0-8.0	6286420	N	3550B	8270C	III
12-May-2011	SL-101-SA8N-SB-7.0-8.0	6286420	N	3550B	8270C SIM	III
12-May-2011	SL-101-SA8N-SB-7.0-8.0	6286420	N	5035	8015M	III
12-May-2011	SL-101-SA8N-SB-7.0-8.0	6286420	N	5035	8260B	III
12-May-2011	SL-101-SA8N-SB-7.0-8.0	6286420	N	5035	8260B SIM	III
12-May-2011	SL-101-SA8N-SB-7.0-8.0	6286420	N	8330	8330A	III
12-May-2011	SL-101-SA8N-SB-7.0-8.0	6286420	N	METHOD	300.0	III
12-May-2011	SL-101-SA8N-SB-7.0-8.0	6286420	N	METHOD	314.0	III
12-May-2011	SL-101-SA8N-SB-7.0-8.0	6286420	N	METHOD	7471A	III
12-May-2011	SL-101-SA8N-SB-7.0-8.0	6286420	N	METHOD	8015B	III
12-May-2011	SL-101-SA8N-SB-7.0-8.0	6286420	N	METHOD	8015M	III
12-May-2011	SL-101-SA8N-SB-7.0-8.0	6286420	N	METHOD	8315A	III
12-May-2011	SL-101-SA8N-SB-7.0-8.0	6286420	N	METHOD	9012B	III
12-May-2011	SL-103-SA8N-SB-3.0-4.0	6286421	N	3050B	6010B	III
12-May-2011	SL-103-SA8N-SB-3.0-4.0	6286421	N	3050B	6020	III
12-May-2011	SL-103-SA8N-SB-3.0-4.0	6286421	N	3060A	7199	III
12-May-2011	SL-103-SA8N-SB-3.0-4.0	6286421	N	3546	1625C	III
12-May-2011	SL-103-SA8N-SB-3.0-4.0	6286421	N	3550B	8015B	III
12-May-2011	SL-103-SA8N-SB-3.0-4.0	6286421	N	3550B	8015M	III
12-May-2011	SL-103-SA8N-SB-3.0-4.0	6286421	N	3550B	8082	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
12-May-2011	SL-103-SA8N-SB-3.0-4.0	6286421	N	3550B	8270C	III
12-May-2011	SL-103-SA8N-SB-3.0-4.0	6286421	N	3550B	8270C SIM	III
12-May-2011	SL-103-SA8N-SB-3.0-4.0	6286421	N	5035	8015M	III
12-May-2011	SL-103-SA8N-SB-3.0-4.0	6286421	N	5035	8260B	III
12-May-2011	SL-103-SA8N-SB-3.0-4.0	6286421	N	5035	8260B SIM	III
12-May-2011	SL-103-SA8N-SB-3.0-4.0	6286421	N	8330	8330A	III
12-May-2011	SL-103-SA8N-SB-3.0-4.0	6286421	N	METHOD	300.0	III
12-May-2011	SL-103-SA8N-SB-3.0-4.0	6286421	N	METHOD	314.0	III
12-May-2011	SL-103-SA8N-SB-3.0-4.0	6286421	N	METHOD	7471A	III
12-May-2011	SL-103-SA8N-SB-3.0-4.0	6286421	N	METHOD	8015B	III
12-May-2011	SL-103-SA8N-SB-3.0-4.0	6286421	N	METHOD	8015M	III
12-May-2011	SL-103-SA8N-SB-3.0-4.0	6286421	N	METHOD	8315A	III
12-May-2011	SL-103-SA8N-SB-3.0-4.0	6286421	N	METHOD	9012B	III
12-May-2011	SL-103-SA8N-SB-3.0-4.0DUP	P286421D270336B	DUP	METHOD	314.0	III
12-May-2011	SL-103-SA8N-SB-3.0-4.0MS	P286421R270358B	MS	METHOD	314.0	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0	6286418	N	3050B	6010B	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0	6286418	N	3050B	6020	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0	6286418	N	3060A	7199	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0	6286418	N	3546	1625C	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0	6286418	N	3550B	8015B	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0	6286418	N	3550B	8015M	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0	6286418	N	3550B	8082	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0	6286418	N	3550B	8270C	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0	6286418	N	3550B	8270C SIM	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0	6286418	N	5035	8015M	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0	6286418	N	5035	8260B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
12-May-2011	SL-099-SA8N-SB-4.0-5.0	6286418	N	5035	8260B SIM	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0	6286418	N	8330	8330A	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0	6286418	N	METHOD	300.0	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0	6286418	N	METHOD	314.0	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0	6286418	N	METHOD	7471A	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0	6286418	N	METHOD	8015B	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0	6286418	N	METHOD	8015M	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0	6286418	N	METHOD	8315A	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0	6286418	N	METHOD	9012B	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0DUP	P286418D271049A	DUP	METHOD	9012B	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0MSD	P286418M321157A	MSD	3550B	8015B	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0MS	P286418R271050A	MS	METHOD	9012B	III
12-May-2011	SL-099-SA8N-SB-4.0-5.0MS	P286418R321111A	MS	3550B	8015B	III
12-May-2011	SL-098-SA8N-SB-4.0-5.0	6286416	N	3050B	6010B	III
12-May-2011	SL-098-SA8N-SB-4.0-5.0	6286416	N	3050B	6020	III
12-May-2011	SL-098-SA8N-SB-4.0-5.0	6286416	N	3060A	7199	III
12-May-2011	SL-098-SA8N-SB-4.0-5.0	6286416	N	3550B	8082	III
12-May-2011	SL-098-SA8N-SB-4.0-5.0	6286416	N	3550B	8270C	III
12-May-2011	SL-098-SA8N-SB-4.0-5.0	6286416	N	3550B	8270C SIM	III
12-May-2011	SL-098-SA8N-SB-4.0-5.0	6286416	N	5035	8260B	III
12-May-2011	SL-098-SA8N-SB-4.0-5.0	6286416	N	5035	8260B SIM	III
12-May-2011	SL-098-SA8N-SB-4.0-5.0	6286416	N	METHOD	300.0	III
12-May-2011	SL-098-SA8N-SB-4.0-5.0	6286416	N	METHOD	314.0	III
12-May-2011	SL-098-SA8N-SB-4.0-5.0	6286416	N	METHOD	7471A	III
12-May-2011	SL-098-SA8N-SB-9.0-10	6286417	N	3050B	6010B	III
12-May-2011	SL-098-SA8N-SB-9.0-10	6286417	N	3050B	6020	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
12-May-2011	SL-098-SA8N-SB-9.0-10	6286417	N	3060A	7199	III
12-May-2011	SL-098-SA8N-SB-9.0-10	6286417	N	3550B	8082	III
12-May-2011	SL-098-SA8N-SB-9.0-10	6286417	N	3550B	8270C	III
12-May-2011	SL-098-SA8N-SB-9.0-10	6286417	N	3550B	8270C SIM	III
12-May-2011	SL-098-SA8N-SB-9.0-10	6286417	N	METHOD	300.0	III
12-May-2011	SL-098-SA8N-SB-9.0-10	6286417	N	METHOD	314.0	III
12-May-2011	SL-098-SA8N-SB-9.0-10	6286417	N	METHOD	7471A	III
12-May-2011	SL-097-SA8N-SB-4.0-5.0	6286415	N	3050B	6010B	III
12-May-2011	SL-097-SA8N-SB-4.0-5.0	6286415	N	3050B	6020	III
12-May-2011	SL-097-SA8N-SB-4.0-5.0	6286415	N	3060A	7199	III
12-May-2011	SL-097-SA8N-SB-4.0-5.0	6286415	N	3550B	8082	III
12-May-2011	SL-097-SA8N-SB-4.0-5.0	6286415	N	3550B	8270C	III
12-May-2011	SL-097-SA8N-SB-4.0-5.0	6286415	N	3550B	8270C SIM	III
12-May-2011	SL-097-SA8N-SB-4.0-5.0	6286415	N	5035	8260B	III
12-May-2011	SL-097-SA8N-SB-4.0-5.0	6286415	N	5035	8260B SIM	III
12-May-2011	SL-097-SA8N-SB-4.0-5.0	6286415	N	METHOD	300.0	III
12-May-2011	SL-097-SA8N-SB-4.0-5.0	6286415	N	METHOD	314.0	III
12-May-2011	SL-097-SA8N-SB-4.0-5.0	6286415	N	METHOD	7471A	III
12-May-2011	SL-097-SA8N-SB-4.0-5.0DUP	P286415D271336B	DUP	METHOD	300.0	III
12-May-2011	SL-097-SA8N-SB-4.0-5.0MS	P286415R271351B	MS	METHOD	300.0	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE149 **Laboratory:** LL

EDD Filename: DE149_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-097-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 3:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	9.5		0.93	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-098-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 2:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	11.0		0.94	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-098-SA8N-SB-9.0-10 *Collected:* 5/12/2011 2:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.0		0.93	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-099-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 11:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.2		0.92	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-101-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 8:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.5		0.95	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-101-SA8N-SB-7.0-8.0 *Collected:* 5/12/2011 8:45:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate-NO3	1.3	J	0.94	MDL	1.8	PQL	mg/Kg	J	Z

Sample ID: SL-101-SA8N-SB-7.0-8.0 *Collected:* 5/12/2011 8:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.4		0.94	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-103-SA8N-SB-3.0-4.0 *Collected:* 5/12/2011 9:55:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate-NO3	1.2	J	0.95	MDL	1.8	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE149 Laboratory: LL

EDD Filename: DE149_v1 eQAPP Name: CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-103-SA8N-SB-3.0-4.0 *Collected:* 5/12/2011 9:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.95	U	0.95	MDL	1.2	PQL	mg/Kg	UJ	Q

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-097-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 3:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	3.19	J	1.14	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	5.55	J	0.955	MDL	5.69	PQL	mg/Kg	J	Z

Sample ID: SL-098-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 2:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	3.11	J	1.16	MDL	11.6	PQL	mg/Kg	U	B

Sample ID: SL-098-SA8N-SB-9.0-10 *Collected:* 5/12/2011 2:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.34	J	1.00	MDL	5.62	PQL	mg/Kg	J	Z
SODIUM	97.6	J	41.9	MDL	112	PQL	mg/Kg	J	Z
TIN	2.85	J	1.12	MDL	11.2	PQL	mg/Kg	U	B
Zirconium	2.79	J	0.944	MDL	5.62	PQL	mg/Kg	J	Z

Sample ID: SL-099-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 11:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.50	J	0.980	MDL	5.51	PQL	mg/Kg	J	Z
TIN	3.01	J	1.10	MDL	11.0	PQL	mg/Kg	U	B
Zirconium	3.95	J	0.925	MDL	5.51	PQL	mg/Kg	J	Z

Sample ID: SL-101-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 8:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.27	J	1.04	MDL	5.82	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE149 Laboratory: LL

EDD Filename: DE149_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-101-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 8:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	86.3	J	43.4	MDL	116	PQL	mg/Kg	J	Z
TIN	3.06	J	1.16	MDL	11.6	PQL	mg/Kg	U	B
Zirconium	4.38	J	0.978	MDL	5.82	PQL	mg/Kg	J	Z

Sample ID: SL-101-SA8N-SB-7.0-8.0 *Collected:* 5/12/2011 8:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.05	J	1.04	MDL	5.83	PQL	mg/Kg	J	Z
SODIUM	85.5	J	43.5	MDL	117	PQL	mg/Kg	J	Z
TIN	3.34	J	1.17	MDL	11.7	PQL	mg/Kg	U	B
Zirconium	3.23	J	0.980	MDL	5.83	PQL	mg/Kg	J	Z

Sample ID: SL-103-SA8N-SB-3.0-4.0 *Collected:* 5/12/2011 9:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	90.2	J	43.9	MDL	118	PQL	mg/Kg	J	Z
TIN	3.61	J	1.18	MDL	11.8	PQL	mg/Kg	U	B
Zirconium	4.29	J	0.989	MDL	5.89	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-097-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 3:30:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0666	J	0.0446	MDL	0.446	PQL	mg/Kg	J	Z

Sample ID: SL-097-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 3:30:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.259		0.0669	MDL	0.223	PQL	mg/Kg	J	E
ARSENIC	7.06		0.0892	MDL	0.446	PQL	mg/Kg	J	Q
CHROMIUM	25.4		0.134	MDL	0.446	PQL	mg/Kg	J	Q, A
COPPER	12.3		0.0736	MDL	0.446	PQL	mg/Kg	J	Q
LEAD	7.65		0.0116	MDL	0.223	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE149 **Laboratory: LL**

EDD Filename: DE149_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-097-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 3:30:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	16.0		0.112	MDL	0.446	PQL	mg/Kg	J	Q
SILVER	0.0246	J	0.0134	MDL	0.112	PQL	mg/Kg	J	Z
THALLIUM	0.365		0.0335	MDL	0.112	PQL	mg/Kg	J	Q
VANADIUM	50.3		0.0245	MDL	0.112	PQL	mg/Kg	J	A
ZINC	62.9		0.625	MDL	3.35	PQL	mg/Kg	J	A

Sample ID: SL-098-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 2:15:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0905	J	0.0456	MDL	0.456	PQL	mg/Kg	J	Z

Sample ID: SL-098-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 2:15:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.272		0.0685	MDL	0.228	PQL	mg/Kg	J	E
ARSENIC	8.30		0.0913	MDL	0.456	PQL	mg/Kg	J	Q
CHROMIUM	35.9		0.137	MDL	0.456	PQL	mg/Kg	J	Q, A
COPPER	18.8		0.0753	MDL	0.456	PQL	mg/Kg	J	Q
LEAD	11.9		0.0119	MDL	0.228	PQL	mg/Kg	J	Q
NICKEL	23.3		0.114	MDL	0.456	PQL	mg/Kg	J	Q
SILVER	0.0538	J	0.0137	MDL	0.114	PQL	mg/Kg	J	Z
THALLIUM	0.354		0.0342	MDL	0.114	PQL	mg/Kg	J	Q
VANADIUM	67.1		0.0251	MDL	0.114	PQL	mg/Kg	J	A
ZINC	75.4		0.639	MDL	3.42	PQL	mg/Kg	J	A

Sample ID: SL-098-SA8N-SB-9.0-10 *Collected:* 5/12/2011 2:20:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.139	J	0.0454	MDL	0.454	PQL	mg/Kg	J	Z

Sample ID: SL-098-SA8N-SB-9.0-10 *Collected:* 5/12/2011 2:20:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0909	J	0.0681	MDL	0.227	PQL	mg/Kg	J	Z, E
ARSENIC	5.41		0.0907	MDL	0.454	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE149 Laboratory: LL

EDD Filename: DE149_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-098-SA8N-SB-9.0-10 *Collected:* 5/12/2011 2:20:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	16.3		0.136	MDL	0.454	PQL	mg/Kg	J	Q, A
COPPER	7.34		0.0749	MDL	0.454	PQL	mg/Kg	J	Q
LEAD	7.01		0.0118	MDL	0.227	PQL	mg/Kg	J	Q
NICKEL	8.52		0.113	MDL	0.454	PQL	mg/Kg	J	Q
SILVER	0.0306	J	0.0136	MDL	0.113	PQL	mg/Kg	J	Z
THALLIUM	0.358		0.0340	MDL	0.113	PQL	mg/Kg	J	Q
VANADIUM	36.6		0.0250	MDL	0.113	PQL	mg/Kg	J	A
ZINC	52.1		0.635	MDL	3.40	PQL	mg/Kg	J	A

Sample ID: SL-099-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 11:45:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.153	J	0.0445	MDL	0.445	PQL	mg/Kg	J	Z

Sample ID: SL-099-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 11:45:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.126	J	0.0667	MDL	0.222	PQL	mg/Kg	J	Z, E
ARSENIC	5.67		0.0890	MDL	0.445	PQL	mg/Kg	J	Q
CHROMIUM	22.8		0.133	MDL	0.445	PQL	mg/Kg	J	Q, A
COPPER	7.44		0.0734	MDL	0.445	PQL	mg/Kg	J	Q
LEAD	8.10		0.0116	MDL	0.222	PQL	mg/Kg	J	Q
NICKEL	12.2		0.111	MDL	0.445	PQL	mg/Kg	J	Q
SILVER	0.0401	J	0.0133	MDL	0.111	PQL	mg/Kg	J	Z
THALLIUM	0.313		0.0334	MDL	0.111	PQL	mg/Kg	J	Q
VANADIUM	49.7		0.0245	MDL	0.111	PQL	mg/Kg	J	A
ZINC	47.1		0.623	MDL	3.34	PQL	mg/Kg	J	A

Sample ID: SL-101-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 8:40:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.118	J	0.0466	MDL	0.466	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE149 **Laboratory: LL**

EDD Filename: DE149_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: **SL-101-SA8N-SB-4.0-5.0** ***Collected:*** **5/12/2011 8:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.257		0.0699	MDL	0.233	PQL	mg/Kg	J	E
ARSENIC	6.45		0.0931	MDL	0.466	PQL	mg/Kg	J	Q
CHROMIUM	22.3		0.140	MDL	0.466	PQL	mg/Kg	J	Q, A
COPPER	13.4		0.0768	MDL	0.466	PQL	mg/Kg	J	Q
LEAD	9.51		0.0121	MDL	0.233	PQL	mg/Kg	J	Q
NICKEL	13.3		0.116	MDL	0.466	PQL	mg/Kg	J	Q
SILVER	0.0352	J	0.0140	MDL	0.116	PQL	mg/Kg	J	Z
THALLIUM	0.300		0.0349	MDL	0.116	PQL	mg/Kg	J	Q
VANADIUM	45.9		0.0256	MDL	0.116	PQL	mg/Kg	J	A
ZINC	58.5		0.652	MDL	3.49	PQL	mg/Kg	J	A

Sample ID: **SL-101-SA8N-SB-7.0-8.0** ***Collected:*** **5/12/2011 8:45:00** ***Analysis Type:*** **REA** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0605	J	0.0457	MDL	0.457	PQL	mg/Kg	J	Z

Sample ID: **SL-101-SA8N-SB-7.0-8.0** ***Collected:*** **5/12/2011 8:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0686	U	0.0686	MDL	0.229	PQL	mg/Kg	UJ	E
ARSENIC	4.00		0.0915	MDL	0.457	PQL	mg/Kg	J	Q
CHROMIUM	12.5		0.137	MDL	0.457	PQL	mg/Kg	J	Q, A
COPPER	4.96		0.0755	MDL	0.457	PQL	mg/Kg	J	Q
LEAD	5.09		0.0119	MDL	0.229	PQL	mg/Kg	J	Q
NICKEL	5.61		0.114	MDL	0.457	PQL	mg/Kg	J	Q
SILVER	0.0167	J	0.0137	MDL	0.114	PQL	mg/Kg	J	Z
THALLIUM	0.208		0.0343	MDL	0.114	PQL	mg/Kg	J	Q
VANADIUM	29.6		0.0252	MDL	0.114	PQL	mg/Kg	J	A
ZINC	37.9		0.640	MDL	3.43	PQL	mg/Kg	J	A

Sample ID: **SL-103-SA8N-SB-3.0-4.0** ***Collected:*** **5/12/2011 9:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **2**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.109	J	0.0706	MDL	0.235	PQL	mg/Kg	J	Z, E
ARSENIC	5.42		0.0942	MDL	0.471	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE149 **Laboratory:** LL

EDD Filename: DE149_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-103-SA8N-SB-3.0-4.0 *Collected:* 5/12/2011 9:55:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	18.6		0.141	MDL	0.471	PQL	mg/Kg	J	Q, A
COPPER	6.05		0.0777	MDL	0.471	PQL	mg/Kg	J	Q
LEAD	7.23		0.0122	MDL	0.235	PQL	mg/Kg	J	Q
NICKEL	10.0		0.118	MDL	0.471	PQL	mg/Kg	J	Q
THALLIUM	0.261		0.0353	MDL	0.118	PQL	mg/Kg	J	Q
VANADIUM	41.5		0.0259	MDL	0.118	PQL	mg/Kg	J	A
ZINC	65.2		0.659	MDL	3.53	PQL	mg/Kg	J	A

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: SL-097-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 3:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.32	J	0.23	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-103-SA8N-SB-3.0-4.0 *Collected:* 5/12/2011 9:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.64	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 1625C **Matrix:** SO

Sample ID: SL-101-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 8:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	27.3	J	19.6	MDL	39.2	PQL	ng/Kg	J	Z

Sample ID: SL-101-SA8N-SB-7.0-8.0 *Collected:* 5/12/2011 8:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	26.1	J	19.6	MDL	39.1	PQL	ng/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE149 Laboratory: LL

EDD Filename: DE149_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 1625C **Matrix:** SO

Sample ID: SL-103-SA8N-SB-3.0-4.0 *Collected:* 5/12/2011 9:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	46.0		19.7	MDL	39.4	PQL	ng/Kg	J	S

Method Category: SVOA

Method: 8015M **Matrix:** SO

Sample ID: SL-099-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 11:45:00 *Analysis Type:* REA2S *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.97	J	0.45	MDL	1.4	PQL	mg/Kg	J	Z
EFH (C8-C11)	1.3	J	0.45	MDL	1.4	PQL	mg/Kg	UJ	L, B

Sample ID: SL-101-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 8:40:00 *Analysis Type:* REA2S *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.94	J	0.47	MDL	1.4	PQL	mg/Kg	J	Z
EFH (C8-C11)	1.3	J	0.47	MDL	1.4	PQL	mg/Kg	UJ	L, B

Sample ID: SL-101-SA8N-SB-7.0-8.0 *Collected:* 5/12/2011 8:45:00 *Analysis Type:* REA2S *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.99	J	0.47	MDL	1.4	PQL	mg/Kg	J	Z
EFH (C8-C11)	1.3	J	0.47	MDL	1.4	PQL	mg/Kg	UJ	L, B

Sample ID: SL-103-SA8N-SB-3.0-4.0 *Collected:* 5/12/2011 9:55:00 *Analysis Type:* REA2S *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C30-C40)	0.87	J	0.47	MDL	1.4	PQL	mg/Kg	J	Z
EFH (C8-C11)	1.4		0.47	MDL	1.4	PQL	mg/Kg	UJ	L, B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE149 **Laboratory:** LL

EDD Filename: DE149_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-097-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 3:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
4-BROMOPHENYL-PHENYLETHER	19	U	19	MDL	190	PQL	ug/Kg	UJ	L

Sample ID: SL-098-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 2:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
4-BROMOPHENYL-PHENYLETHER	19	U	19	MDL	190	PQL	ug/Kg	UJ	L

Sample ID: SL-098-SA8N-SB-9.0-10 *Collected:* 5/12/2011 2:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
4-BROMOPHENYL-PHENYLETHER	19	U	19	MDL	190	PQL	ug/Kg	UJ	L

Sample ID: SL-099-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 11:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROBENZENE	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
4-BROMOPHENYL-PHENYLETHER	19	U	19	MDL	190	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	22	J	19	MDL	380	PQL	ug/Kg	J	Z

Sample ID: SL-101-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 8:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROBENZENE	20	U	20	MDL	200	PQL	ug/Kg	UJ	L
4-BROMOPHENYL-PHENYLETHER	20	U	20	MDL	200	PQL	ug/Kg	UJ	L

Sample ID: SL-101-SA8N-SB-7.0-8.0 *Collected:* 5/12/2011 8:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROBENZENE	20	U	20	MDL	200	PQL	ug/Kg	UJ	L
4-BROMOPHENYL-PHENYLETHER	20	U	20	MDL	200	PQL	ug/Kg	UJ	L

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE149 Laboratory: LL

EDD Filename: DE149_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA **Method:** 8270C **Matrix:** SO

Sample ID: SL-103-SA8N-SB-3.0-4.0 *Collected:* 5/12/2011 9:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROBENZENE	20	U	20	MDL	200	PQL	ug/Kg	UJ	L
4-BROMOPHENYL-PHENYLETHER	20	U	20	MDL	200	PQL	ug/Kg	UJ	L

Method Category: SVOA **Method:** 8270C SIM **Matrix:** SO

Sample ID: SL-097-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 3:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	7.4	J	7.0	MDL	21	PQL	ug/Kg	J	Z

Sample ID: SL-098-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 2:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	8.8	J	7.0	MDL	21	PQL	ug/Kg	J	Z
Di-n-butylphthalate	8.4	J	7.0	MDL	21	PQL	ug/Kg	J	Z

Sample ID: SL-098-SA8N-SB-9.0-10 *Collected:* 5/12/2011 2:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	7.0	J	7.0	MDL	21	PQL	ug/Kg	J	Z

Sample ID: SL-099-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 11:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Di-n-butylphthalate	7.1	J	6.9	MDL	21	PQL	ug/Kg	J	Z

Sample ID: SL-103-SA8N-SB-3.0-4.0 *Collected:* 5/12/2011 9:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	7.4	J	7.1	MDL	21	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE149 Laboratory: LL

EDD Filename: DE149_v1 eQAPP Name: CDM_SSFL_110509

Method Category: VOA

Method: 8015B **Matrix:** SO

Sample ID: SL-099-SA8N-SB-4.0-5.0 *Collected:* 5/12/2011 11:45:00 *Analysis Type:* REA3S *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
m-Terphenyl	1.7	U	1.7	MDL	4.0	PQL	mg/Kg	UJ	Q

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-103-SA8N-SB-3.0-4.0 *Collected:* 5/12/2011 9:55:00 *Analysis Type:* RES *Dilution:* 0.8

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	4.3		0.23	MDL	3.8	PQL	ug/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE149 **Laboratory: LL**

EDD Filename: DE149_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision
E	Laboratory Triplicate Precision
E	Matrix Spike Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE149 **Laboratory: LL**

EDD Filename: DE149_v1 **eQAPP Name: CDM_SSFL_110509**

F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Laboratory Triplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE149 **Laboratory: LL**

EDD Filename: DE149_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE149

Method Blank Outlier Report

Lab Reporting Batch ID: DE149 **Laboratory: LL**

EDD Filename: DE149_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P13608AB221711	5/18/2011 5:11:00 PM	CALCIUM PHOSPHORUS TIN	9.14 mg/Kg 1.29 mg/Kg 1.61 mg/Kg	SL-097-SA8N-SB-4.0-5.0 SL-098-SA8N-SB-4.0-5.0 SL-098-SA8N-SB-9.0-10 SL-099-SA8N-SB-4.0-5.0 SL-101-SA8N-SB-4.0-5.0 SL-101-SA8N-SB-7.0-8.0 SL-103-SA8N-SB-3.0-4.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-097-SA8N-SB-4.0-5.0(RES)	TIN	3.19 mg/Kg	3.19U mg/Kg
SL-098-SA8N-SB-4.0-5.0(RES)	TIN	3.11 mg/Kg	3.11U mg/Kg
SL-098-SA8N-SB-9.0-10(RES)	TIN	2.85 mg/Kg	2.85U mg/Kg
SL-099-SA8N-SB-4.0-5.0(RES)	TIN	3.01 mg/Kg	3.01U mg/Kg
SL-101-SA8N-SB-4.0-5.0(RES)	TIN	3.06 mg/Kg	3.06U mg/Kg
SL-101-SA8N-SB-7.0-8.0(RES)	TIN	3.34 mg/Kg	3.34U mg/Kg
SL-103-SA8N-SB-3.0-4.0(RES)	TIN	3.61 mg/Kg	3.61U mg/Kg

Method: **8015M**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P37375AB321339A	5/25/2011 1:39:00 PM	EFH (C8-C11)	1.3 mg/Kg	SL-099-SA8N-SB-4.0-5.0 SL-101-SA8N-SB-4.0-5.0 SL-101-SA8N-SB-7.0-8.0 SL-103-SA8N-SB-3.0-4.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-099-SA8N-SB-4.0-5.0(REA2S)	EFH (C8-C11)	1.3 mg/Kg	1.4U mg/Kg
SL-101-SA8N-SB-4.0-5.0(REA2S)	EFH (C8-C11)	1.3 mg/Kg	1.4U mg/Kg
SL-101-SA8N-SB-7.0-8.0(REA2S)	EFH (C8-C11)	1.3 mg/Kg	1.4U mg/Kg
SL-103-SA8N-SB-3.0-4.0(REA2S)	EFH (C8-C11)	1.4 mg/Kg	1.4U mg/Kg

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB57B210500A	5/17/2011 5:00:00 AM	METHYLENE CHLORIDE	0.55 ug/Kg	SL-097-SA8N-SB-4.0-5.0 SL-098-SA8N-SB-4.0-5.0 SL-099-SA8N-SB-4.0-5.0 SL-101-SA8N-SB-4.0-5.0 SL-101-SA8N-SB-7.0-8.0 SL-103-SA8N-SB-3.0-4.0

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Method Blank Outlier Report

Lab Reporting Batch ID: DE149 **Laboratory: LL**

EDD Filename: DE149_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-103-SA8N-SB-3.0-4.0(RES)	METHYLENE CHLORIDE	4.3 ug/Kg	4.3U ug/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE149 **Laboratory: LL**

EDD Filename: DE149_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-099-SA8N-SB-4.0-5.0MS SL-099-SA8N-SB-4.0-5.0MSD (SL-099-SA8N-SB-4.0-5.0)	m-Terphenyl	74	69	75.00-125.00	-	m-Terphenyl	J (all detects) UJ (all non-detects)

Method: 300.0
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-097-SA8N-SB-4.0-5.0MS (SL-097-SA8N-SB-4.0-5.0 SL-098-SA8N-SB-4.0-5.0 SL-098-SA8N-SB-9.0-10 SL-099-SA8N-SB-4.0-5.0 SL-101-SA8N-SB-4.0-5.0 SL-101-SA8N-SB-7.0-8.0 SL-103-SA8N-SB-3.0-4.0)	FLUORIDE	71	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE149 **Laboratory: LL**

EDD Filename: DE149_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	*Analyte*	*Sample RPD*	*eQAPP RPD*	*Flag*
SL-097-SA8N-SB-4.0-5.0DUP (SL-097-SA8N-SB-4.0-5.0 SL -098-SA8N-SB-4.0-5.0 SL -098-SA8N-SB-9.0-10 SL -099-SA8N-SB-4.0-5.0 SL -101-SA8N-SB-4.0-5.0 SL -101-SA8N-SB-7.0-8.0 SL -103-SA8N-SB-3.0-4.0)	FLUORIDE	33	20.00	No Qual, OK by difference

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE149 **Laboratory: LL**

EDD Filename: DE149_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8330A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11372AQ240134A (SL-099-SA8N-SB-4.0-5.0 SL -101-SA8N-SB-4.0-5.0 SL -101-SA8N-SB-7.0-8.0 SL -103-SA8N-SB-3.0-4.0)	PETN	121	-	80.00-120.00	-	PETN	J (all detects)

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11375AQ321405A (SL-099-SA8N-SB-4.0-5.0 SL -101-SA8N-SB-4.0-5.0 SL -101-SA8N-SB-7.0-8.0 SL -103-SA8N-SB-3.0-4.0)	EFH (C8-C11)	198	-	66.00-113.00	-	EFH (C8-C11)	J(all detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P13626AQ221000A (SL-097-SA8N-SB-4.0-5.0 SL -098-SA8N-SB-4.0-5.0 SL -098-SA8N-SB-9.0-10 SL -099-SA8N-SB-4.0-5.0 SL -101-SA8N-SB-4.0-5.0 SL -101-SA8N-SB-7.0-8.0 SL -103-SA8N-SB-3.0-4.0)	ANTIMONY	155	-	80.00-120.00	-	ANTIMONY	No Qual, SRM within QC limits

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P6LCLCSQ260838 (SL-097-SA8N-SB-4.0-5.0 SL -098-SA8N-SB-4.0-5.0 SL -098-SA8N-SB-9.0-10 SL -099-SA8N-SB-4.0-5.0 SL -101-SA8N-SB-4.0-5.0 SL -101-SA8N-SB-7.0-8.0 SL -103-SA8N-SB-3.0-4.0)	1,2-DICHLOROBENZENE 4-BROMOPHENYL-PHENYLETH	75 78	- -	79.00-102.00 79.00-117.00	- -	1,2-DICHLOROBENZENE 4-BROMOPHENYL-PHENYLET	J(all detects) UJ(all non-detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE149 **Laboratory: LL**

EDD Filename: DE149_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8260B**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*LCS %R*	*LCSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
LCSB57Q210522A	N-BUTYLBENZENE	121	121	72.00-120.00	-	N-BUTYLBENZENE	
LCSB57Y210544A	N-PROPYLBENZENE	123	-	77.00-120.00	-	N-PROPYLBENZENE	
(SL-097-SA8N-SB-4.0-5.0	SEC-BUTYLBENZENE	125	125	75.00-120.00	-	SEC-BUTYLBENZENE	
SL -098-SA8N-SB-4.0-5.0							J(all detects)
SL -099-SA8N-SB-4.0-5.0							
SL -101-SA8N-SB-4.0-5.0							
SL -101-SA8N-SB-7.0-8.0							
SL -103-SA8N-SB-3.0-4.0)							

Surrogate Outlier Report

Lab Reporting Batch ID: DE149 **Laboratory: LL**

EDD Filename: DE149_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1625C**
Matrix: **SO**

Sample ID	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-103-SA8N-SB-3.0-4.0	N-Nitrosodimethylamine-d6	160	50.00-150.00	All Target Analytes	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE149 **Laboratory: LL**

EDD Filename: DE149_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 1625C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-101-SA8N-SB-4.0-5.0	N-NITROSODIMETHYLAMINE	J	27.3	39.2	PQL	ng/Kg	J (all detects)
SL-101-SA8N-SB-7.0-8.0	N-NITROSODIMETHYLAMINE	J	26.1	39.1	PQL	ng/Kg	J (all detects)

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-101-SA8N-SB-7.0-8.0	Nitrate-NO3	J	1.3	1.8	PQL	mg/Kg	J (all detects)
SL-103-SA8N-SB-3.0-4.0	Nitrate-NO3	J	1.2	1.8	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-097-SA8N-SB-4.0-5.0	TIN	J	3.19	11.4	PQL	mg/Kg	J (all detects)
	Zirconium	J	5.55	5.69	PQL	mg/Kg	
SL-098-SA8N-SB-4.0-5.0	TIN	J	3.11	11.6	PQL	mg/Kg	J (all detects)
SL-098-SA8N-SB-9.0-10	BORON	J	3.34	5.62	PQL	mg/Kg	J (all detects)
	SODIUM	J	97.6	112	PQL	mg/Kg	
	TIN	J	2.85	11.2	PQL	mg/Kg	
	Zirconium	J	2.79	5.62	PQL	mg/Kg	
SL-099-SA8N-SB-4.0-5.0	BORON	J	4.50	5.51	PQL	mg/Kg	J (all detects)
	TIN	J	3.01	11.0	PQL	mg/Kg	
	Zirconium	J	3.95	5.51	PQL	mg/Kg	
SL-101-SA8N-SB-4.0-5.0	BORON	J	5.27	5.82	PQL	mg/Kg	J (all detects)
	SODIUM	J	86.3	116	PQL	mg/Kg	
	TIN	J	3.06	11.6	PQL	mg/Kg	
	Zirconium	J	4.38	5.82	PQL	mg/Kg	
SL-101-SA8N-SB-7.0-8.0	BORON	J	3.05	5.83	PQL	mg/Kg	J (all detects)
	SODIUM	J	85.5	117	PQL	mg/Kg	
	TIN	J	3.34	11.7	PQL	mg/Kg	
	Zirconium	J	3.23	5.83	PQL	mg/Kg	
SL-103-SA8N-SB-3.0-4.0	SODIUM	J	90.2	118	PQL	mg/Kg	J (all detects)
	TIN	J	3.61	11.8	PQL	mg/Kg	
	Zirconium	J	4.29	5.89	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-097-SA8N-SB-4.0-5.0	SELENIUM	J	0.0666	0.446	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0246	0.112	PQL	mg/Kg	

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Reporting Limit Outliers

Lab Reporting Batch ID: DE149 **Laboratory: LL**

EDD Filename: DE149_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-098-SA8N-SB-4.0-5.0	SELENIUM SILVER	J J	0.0905 0.0538	0.456 0.114	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-098-SA8N-SB-9.0-10	ANTIMONY SELENIUM SILVER	J J J	0.0909 0.139 0.0306	0.227 0.454 0.113	PQL PQL PQL	mg/Kg mg/Kg mg/Kg	J (all detects)
SL-099-SA8N-SB-4.0-5.0	ANTIMONY SELENIUM SILVER	J J J	0.126 0.153 0.0401	0.222 0.445 0.111	PQL PQL PQL	mg/Kg mg/Kg mg/Kg	J (all detects)
SL-101-SA8N-SB-4.0-5.0	SELENIUM SILVER	J J	0.118 0.0352	0.466 0.116	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-101-SA8N-SB-7.0-8.0	SELENIUM SILVER	J J	0.0605 0.0167	0.457 0.114	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-103-SA8N-SB-3.0-4.0	ANTIMONY	J	0.109	0.235	PQL	mg/Kg	J (all detects)

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-097-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.32	1.2	PQL	mg/Kg	J (all detects)
SL-103-SA8N-SB-3.0-4.0	HEXAVALENT CHROMIUM	J	0.64	1.2	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-099-SA8N-SB-4.0-5.0	EFH (C30-C40) EFH (C8-C11)	J J	0.97 1.3	1.4 1.4	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-101-SA8N-SB-4.0-5.0	EFH (C30-C40) EFH (C8-C11)	J J	0.94 1.3	1.4 1.4	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-101-SA8N-SB-7.0-8.0	EFH (C30-C40) EFH (C8-C11)	J J	0.99 1.3	1.4 1.4	PQL PQL	mg/Kg mg/Kg	J (all detects)
SL-103-SA8N-SB-3.0-4.0	EFH (C30-C40)	J	0.87	1.4	PQL	mg/Kg	J (all detects)

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-099-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	22	380	PQL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE149 **Laboratory: LL**

EDD Filename: DE149_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8270C SIM**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-097-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	7.4	21	PQL	ug/Kg	J (all detects)
SL-098-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE Di-n-butylphthalate	J J	8.8 8.4	21 21	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-098-SA8N-SB-9.0-10	BIS(2-ETHYLHEXYL)PHTHALATE	J	7.0	21	PQL	ug/Kg	J (all detects)
SL-099-SA8N-SB-4.0-5.0	Di-n-butylphthalate	J	7.1	21	PQL	ug/Kg	J (all detects)
SL-103-SA8N-SB-3.0-4.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	7.4	21	PQL	ug/Kg	J (all detects)

LDC #: 26275K4 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/29/17
SDG #: DE149 ADR Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: MV
2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6010B/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates: 5/12/11
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	A	Not qual. by RB/CCBs
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	SW	3 DE 149 ✓
VII.	Duplicate Sample Analysis	SW	
VIII.	Laboratory Control Samples (LCS)	NA	SRM
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	Cr, V, Zn (DE149)
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Soil

1	SL-097-SA8N-SB-4.0-5.0	11		21		31	
2	SL-098-SA8N-SB-4.0-5.0	12		22		32	
3	SL-098-SA8N-SB-9.0-10.0	13		23		33	
4	SL-099-SA8N-SB-4.0-5.0	14		24		34	
5	SL-101-SA8N-SB-4.0-5.0	15		25		35	
6	SL-101-SA8N-SB-7.0-8.0	16		26		36	
7	SL-103-SA8N-SB-3.0-4.0	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

SAMPLE DELIVERY GROUP

DE150

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-May-2011	TB-051311	6287603	TB	5030B	8260B	III
13-May-2011	TB-051311	6287603	TB	5030B	8260B SIM	III
13-May-2011	SL-096-SA8N-SB-4.0-5.0	6287599	N	3050B	6010B	III
13-May-2011	SL-096-SA8N-SB-4.0-5.0	6287599	N	3050B	6020	III
13-May-2011	SL-096-SA8N-SB-4.0-5.0	6287599	N	3060A	7199	III
13-May-2011	SL-096-SA8N-SB-4.0-5.0	6287599	N	3550B	8082	III
13-May-2011	SL-096-SA8N-SB-4.0-5.0	6287599	N	3550B	8270C	III
13-May-2011	SL-096-SA8N-SB-4.0-5.0	6287599	N	3550B	8270C SIM	III
13-May-2011	SL-096-SA8N-SB-4.0-5.0	6287599	N	5035	8260B	III
13-May-2011	SL-096-SA8N-SB-4.0-5.0	6287599	N	5035	8260B SIM	III
13-May-2011	SL-096-SA8N-SB-4.0-5.0	6287599	N	METHOD	300.0	III
13-May-2011	SL-096-SA8N-SB-4.0-5.0	6287599	N	METHOD	314.0	III
13-May-2011	SL-096-SA8N-SB-4.0-5.0	6287599	N	METHOD	7471A	III
13-May-2011	SL-096-SA8N-SB-9.0-10.0	6287600	N	3050B	6010B	III
13-May-2011	SL-096-SA8N-SB-9.0-10.0	6287600	N	3050B	6020	III
13-May-2011	SL-096-SA8N-SB-9.0-10.0	6287600	N	3060A	7199	III
13-May-2011	SL-096-SA8N-SB-9.0-10.0	6287600	N	3550B	8082	III
13-May-2011	SL-096-SA8N-SB-9.0-10.0	6287600	N	3550B	8270C	III
13-May-2011	SL-096-SA8N-SB-9.0-10.0	6287600	N	3550B	8270C SIM	III
13-May-2011	SL-096-SA8N-SB-9.0-10.0	6287600	N	METHOD	300.0	III
13-May-2011	SL-096-SA8N-SB-9.0-10.0	6287600	N	METHOD	314.0	III
13-May-2011	SL-096-SA8N-SB-9.0-10.0	6287600	N	METHOD	7471A	III
13-May-2011	SL-094-SA8N-SB-4.0-5.0	6287596	N	3050B	6010B	III
13-May-2011	SL-094-SA8N-SB-4.0-5.0	6287596	N	3050B	6020	III
13-May-2011	SL-094-SA8N-SB-4.0-5.0	6287596	N	3060A	7199	III
13-May-2011	SL-094-SA8N-SB-4.0-5.0	6287596	N	3550B	8082	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-May-2011	SL-094-SA8N-SB-4.0-5.0	6287596	N	3550B	8270C	III
13-May-2011	SL-094-SA8N-SB-4.0-5.0	6287596	N	3550B	8270C SIM	III
13-May-2011	SL-094-SA8N-SB-4.0-5.0	6287596	N	5035	8260B	III
13-May-2011	SL-094-SA8N-SB-4.0-5.0	6287596	N	5035	8260B SIM	III
13-May-2011	SL-094-SA8N-SB-4.0-5.0	6287596	N	METHOD	300.0	III
13-May-2011	SL-094-SA8N-SB-4.0-5.0	6287596	N	METHOD	314.0	III
13-May-2011	SL-094-SA8N-SB-4.0-5.0	6287596	N	METHOD	7471A	III
13-May-2011	SL-094-SA8N-SB-4.0-5.0DUP	P287596D271043A	DUP	METHOD	300.0	III
13-May-2011	SL-094-SA8N-SB-4.0-5.0MSD	P287596M260237	MSD	3550B	8270C SIM	III
13-May-2011	SL-094-SA8N-SB-4.0-5.0MSD	P287596M262339	MSD	3550B	8270C	III
13-May-2011	SL-094-SA8N-SB-4.0-5.0MS	P287596R260207	MS	3550B	8270C SIM	III
13-May-2011	SL-094-SA8N-SB-4.0-5.0MS	P287596R262313	MS	3550B	8270C	III
13-May-2011	SL-094-SA8N-SB-4.0-5.0MS	P287596R271058A	MS	METHOD	300.0	III
13-May-2011	SL-094-SA8N-SB-7.5-8.5	6287597	N	3050B	6010B	III
13-May-2011	SL-094-SA8N-SB-7.5-8.5	6287597	N	3050B	6020	III
13-May-2011	SL-094-SA8N-SB-7.5-8.5	6287597	N	3060A	7199	III
13-May-2011	SL-094-SA8N-SB-7.5-8.5	6287597	N	3550B	8082	III
13-May-2011	SL-094-SA8N-SB-7.5-8.5	6287597	N	3550B	8270C	III
13-May-2011	SL-094-SA8N-SB-7.5-8.5	6287597	N	3550B	8270C SIM	III
13-May-2011	SL-094-SA8N-SB-7.5-8.5	6287597	N	METHOD	300.0	III
13-May-2011	SL-094-SA8N-SB-7.5-8.5	6287597	N	METHOD	314.0	III
13-May-2011	SL-094-SA8N-SB-7.5-8.5	6287597	N	METHOD	7471A	III
13-May-2011	SL-095-SA8N-SB-4.0-5.0	6287598	N	3050B	6010B	III
13-May-2011	SL-095-SA8N-SB-4.0-5.0	6287598	N	3050B	6020	III
13-May-2011	SL-095-SA8N-SB-4.0-5.0	6287598	N	3060A	7199	III
13-May-2011	SL-095-SA8N-SB-4.0-5.0	6287598	N	3550B	8082	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-May-2011	SL-104-SA8N-SB-9.0-10.0	6287602	N	METHOD	7471A	III

III = EPA Level 3 Data Review
IV = EPA Level 4 Data Validation
N = Normal Sample
FD = Field Duplicate
TB = Trip Blank
FB = Field Blank
MS = Matrix Spike
MSD = Matrix Spike Duplicate

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE150 **Laboratory:** LL

EDD Filename: DE150_v1. **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-094-SA8N-SB-4.0-5.0 **Collected:** 5/13/2011 10:30:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.5		0.96	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-094-SA8N-SB-7.5-8.5 **Collected:** 5/13/2011 10:35:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.9		0.91	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-095-SA8N-SB-4.0-5.0 **Collected:** 5/13/2011 11:43:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.4		0.93	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-096-SA8N-SB-4.0-5.0 **Collected:** 5/13/2011 9:10:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.2		0.95	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-096-SA8N-SB-9.0-10.0 **Collected:** 5/13/2011 9:15:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.2		0.92	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-104-SA8N-SB-4.0-5.0 **Collected:** 5/13/2011 2:50:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.3		0.91	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-104-SA8N-SB-9.0-10.0 **Collected:** 5/13/2011 3:06:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.6		0.95	MDL	1.2	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE150 **Laboratory:** LL

EDD Filename: DE150_v1. **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-094-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 10:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	3.05	J	1.15	MDL	11.5	PQL	mg/Kg	U	B

Sample ID: SL-094-SA8N-SB-7.5-8.5 *Collected:* 5/13/2011 10:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	3.25	J	1.13	MDL	11.3	PQL	mg/Kg	U	B
Zirconium	3.19	J	0.951	MDL	5.66	PQL	mg/Kg	J	Z

Sample ID: SL-095-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 11:43:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	3.00	J	1.13	MDL	11.3	PQL	mg/Kg	U	B

Sample ID: SL-096-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 9:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	3.07	J	1.16	MDL	11.6	PQL	mg/Kg	U	B

Sample ID: SL-096-SA8N-SB-9.0-10.0 *Collected:* 5/13/2011 9:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.00	J	1.02	MDL	5.71	PQL	mg/Kg	J	Z
TIN	3.15	J	1.14	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	2.65	J	0.959	MDL	5.71	PQL	mg/Kg	J	Z

Sample ID: SL-104-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 2:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	3.05	J	1.13	MDL	11.3	PQL	mg/Kg	U	B
Zirconium	4.38	J	0.949	MDL	5.65	PQL	mg/Kg	J	Z

Sample ID: SL-104-SA8N-SB-9.0-10.0 *Collected:* 5/13/2011 3:06:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.77	J	1.02	MDL	5.74	PQL	mg/Kg	J	Z
TIN	3.65	J	1.15	MDL	11.5	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE150 Laboratory: LL

EDD Filename: DE150_v1. eQAPP Name: CDM_SSFL_110509

Method Category: METALS **Method:** 6010B **Matrix:** SO

Sample ID: SL-104-SA8N-SB-9.0-10.0 *Collected:* 5/13/2011 3:06:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Zirconium	4.51	J	0.965	MDL	5.74	PQL	mg/Kg	J	Z

Method Category: METALS **Method:** 6020 **Matrix:** SO

Sample ID: SL-094-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 10:30:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.248	J	0.0474	MDL	0.474	PQL	mg/Kg	J	Z

Sample ID: SL-094-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 10:30:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0479	J	0.0142	MDL	0.118	PQL	mg/Kg	J	Z

Sample ID: SL-094-SA8N-SB-7.5-8.5 *Collected:* 5/13/2011 10:35:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0988	J	0.0444	MDL	0.444	PQL	mg/Kg	J	Z

Sample ID: SL-094-SA8N-SB-7.5-8.5 *Collected:* 5/13/2011 10:35:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0689	J	0.0666	MDL	0.222	PQL	mg/Kg	J	Z
CADMIUM	0.0740	J	0.0444	MDL	0.111	PQL	mg/Kg	J	Z
SILVER	0.0560	J	0.0133	MDL	0.111	PQL	mg/Kg	J	Z

Sample ID: SL-095-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 11:43:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0518	J	0.0458	MDL	0.458	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE150 **Laboratory: LL**

EDD Filename: DE150_v1. **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-095-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 11:43:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0440	J	0.0137	MDL	0.114	PQL	mg/Kg	J	Z

Sample ID: SL-096-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 9:10:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.157	J	0.0470	MDL	0.470	PQL	mg/Kg	J	Z

Sample ID: SL-096-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 9:10:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0746	J	0.0141	MDL	0.118	PQL	mg/Kg	J	Z

Sample ID: SL-096-SA8N-SB-9.0-10.0 *Collected:* 5/13/2011 9:15:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.177	J	0.0448	MDL	0.448	PQL	mg/Kg	J	Z

Sample ID: SL-096-SA8N-SB-9.0-10.0 *Collected:* 5/13/2011 9:15:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.104	J	0.0672	MDL	0.224	PQL	mg/Kg	J	Z
SILVER	0.0401	J	0.0134	MDL	0.112	PQL	mg/Kg	J	Z

Sample ID: SL-104-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 2:50:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0680	J	0.0448	MDL	0.448	PQL	mg/Kg	J	Z

Sample ID: SL-104-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 2:50:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.141	J	0.0672	MDL	0.224	PQL	mg/Kg	J	Z
CADMIUM	0.0892	J	0.0448	MDL	0.112	PQL	mg/Kg	J	Z
SILVER	0.0509	J	0.0134	MDL	0.112	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE150 **Laboratory: LL**

EDD Filename: DE150_v1. **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-104-SA8N-SB-9.0-10.0 *Collected:* 5/13/2011 3:06:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0526	J	0.0473	MDL	0.473	PQL	mg/Kg	J	Z

Sample ID: SL-104-SA8N-SB-9.0-10.0 *Collected:* 5/13/2011 3:06:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0203	J	0.0142	MDL	0.118	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: SL-094-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 10:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.46	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-096-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 9:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.47	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-104-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 2:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.38	J	0.23	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-104-SA8N-SB-9.0-10.0 *Collected:* 5/13/2011 3:06:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.37	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE150 **Laboratory:** LL

EDD Filename: DE150_v1. **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS **Method:** 7471A **Matrix:** SO

Sample ID: SL-095-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 11:43:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0135	J	0.0033	MDL	0.114	PQL	mg/Kg	J	Z

Sample ID: SL-096-SA8N-SB-9.0-10.0 *Collected:* 5/13/2011 9:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0078	J	0.0032	MDL	0.111	PQL	mg/Kg	J	Z

Method Category: SVOA **Method:** 8082 **Matrix:** SO

Sample ID: SL-095-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 11:43:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	0.94	J	0.38	MDL	2.0	PQL	ug/Kg	J	Z

Method Category: SVOA **Method:** 8270C **Matrix:** SO

Sample ID: SL-094-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 10:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZIDINE	1400	U	1400	MDL	4000	PQL	ug/Kg	UJ	Q

Sample ID: SL-096-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 9:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	21	J	20	MDL	390	PQL	ug/Kg	J	Z

Method Category: SVOA **Method:** 8270C SIM **Matrix:** SO

Sample ID: SL-094-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 10:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	0.88	J	0.80	MDL	2.0	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE150 **Laboratory: LL**

EDD Filename: DE150_v1. **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-094-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 10:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	9.2	J	7.2	MDL	22	PQL	ug/Kg	J	Z, L

Sample ID: SL-094-SA8N-SB-7.5-8.5 *Collected:* 5/13/2011 10:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	7.4	J	6.8	MDL	20	PQL	ug/Kg	J	Z, L

Sample ID: SL-095-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 11:43:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	7.7	J	6.9	MDL	21	PQL	ug/Kg	J	Z, L

Sample ID: SL-104-SA8N-SB-9.0-10.0 *Collected:* 5/13/2011 3:06:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	1.6	U	1.6	MDL	3.9	PQL	ug/Kg	UJ	S
ACENAPHTHENE	1.6	U	1.6	MDL	3.9	PQL	ug/Kg	UJ	S
ACENAPHTHYLENE	0.78	U	0.78	MDL	3.9	PQL	ug/Kg	UJ	S
ANTHRACENE	0.78	U	0.78	MDL	3.9	PQL	ug/Kg	UJ	S
BENZO(A)ANTHRACENE	1.6	U	1.6	MDL	3.9	PQL	ug/Kg	UJ	S
BENZO(A)PYRENE	1.6	U	1.6	MDL	3.9	PQL	ug/Kg	UJ	S
BENZO(B)FLUORANTHENE	1.6	U	1.6	MDL	3.9	PQL	ug/Kg	UJ	S
BENZO(G,H,I)PERYLENE	1.6	U	1.6	MDL	3.9	PQL	ug/Kg	UJ	S
BENZO(K)FLUORANTHENE	1.6	U	1.6	MDL	3.9	PQL	ug/Kg	UJ	S
BIS(2-ETHYLHEXYL)PHTHALATE	14	U	14	MDL	42	PQL	ug/Kg	UJ	S
Butylbenzylphthalate	14	U	14	MDL	42	PQL	ug/Kg	UJ	S
CHRYSENE	0.78	U	0.78	MDL	3.9	PQL	ug/Kg	UJ	S
DIBENZO(A,H)ANTHRACENE	1.6	U	1.6	MDL	3.9	PQL	ug/Kg	UJ	S
Diethylphthalate	14	U	14	MDL	42	PQL	ug/Kg	UJ	S
Dimethylphthalate	14	U	14	MDL	42	PQL	ug/Kg	UJ	S
Di-n-butylphthalate	14	U	14	MDL	42	PQL	ug/Kg	UJ	S
Di-n-octylphthalate	14	U	14	MDL	42	PQL	ug/Kg	UJ	S
FLUORANTHENE	1.6	U	1.6	MDL	3.9	PQL	ug/Kg	UJ	S
FLUORENE	1.6	U	1.6	MDL	3.9	PQL	ug/Kg	UJ	S
INDENO(1,2,3-CD)PYRENE	1.6	U	1.6	MDL	3.9	PQL	ug/Kg	UJ	S

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE150 Laboratory: LL

EDD Filename: DE150_v1. eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: SL-104-SA8N-SB-9.0-10.0 *Collected:* 5/13/2011 3:06:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	1.6	U	1.6	MDL	3.9	PQL	ug/Kg	UJ	S
N-NITROSODIMETHYLAMINE	1.6	U	1.6	MDL	3.9	PQL	ug/Kg	UJ	S
PHENANTHRENE	1.6	U	1.6	MDL	3.9	PQL	ug/Kg	UJ	S
PYRENE	1.6	U	1.6	MDL	3.9	PQL	ug/Kg	UJ	S

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-096-SA8N-SB-4.0-5.0 *Collected:* 5/13/2011 9:10:00 *Analysis Type:* RES *Dilution:* 0.91

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHYLENE CHLORIDE	4.6		0.26	MDL	4.3	PQL	ug/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE150 **Laboratory: LL**

EDD Filename: DE150_v1. **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
	Sampling to Leaching Estimation
	Sampling to Leaching Rejection
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Continuing Calibration Verification Percent Recovery Lower Estimation
C	Continuing Calibration Verification Percent Recovery Lower Rejection
C	Continuing Calibration Verification Percent Recovery Upper Estimation
C	Continuing Calibration Verification Percent Recovery Upper Rejection
C	Continuing Calibration Verification Relative Response Factor
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Relative Response Factor
C	Initial Calibration Verification Correlation Coefficient

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE150 **Laboratory: LL**

EDD Filename: DE150_v1. **eQAPP Name: CDM_SSFL_110509**

C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Verification Percent Recovery Lower Estimation
C	Initial Calibration Verification Percent Recovery Lower Rejection
C	Initial Calibration Verification Percent Recovery Upper Estimation
C	Initial Calibration Verification Percent Recovery Upper Rejection
C	Initial Calibration Verification Relative Response Factor
E	Laboratory Control Precision
E	Laboratory Duplicate Precision
E	Laboratory Triplicate Precision
E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE150 **Laboratory: LL**

EDD Filename: DE150_v1. **eQAPP Name: CDM_SSFL_110509**

L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Laboratory Triplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
Q	Matrix Spike Upper Rejection
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

DE150

Method Blank Outlier Report

Lab Reporting Batch ID: DE150 Laboratory: LL

EDD Filename: DE150_v1. eQAPP Name: CDM_SSFL_110509

Method: 6010B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P13608AB221711	5/18/2011 5:11:00 PM	CALCIUM PHOSPHORUS TIN	9.14 mg/Kg 1.29 mg/Kg 1.61 mg/Kg	SL-094-SA8N-SB-4.0-5.0 SL-094-SA8N-SB-7.5-8.5 SL-095-SA8N-SB-4.0-5.0 SL-096-SA8N-SB-4.0-5.0 SL-096-SA8N-SB-9.0-10.0 SL-104-SA8N-SB-4.0-5.0 SL-104-SA8N-SB-9.0-10.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-094-SA8N-SB-4.0-5.0(RES)	TIN	3.05 mg/Kg	3.05U mg/Kg
SL-094-SA8N-SB-7.5-8.5(RES)	TIN	3.25 mg/Kg	3.25U mg/Kg
SL-095-SA8N-SB-4.0-5.0(RES)	TIN	3.00 mg/Kg	3.00U mg/Kg
SL-096-SA8N-SB-4.0-5.0(RES)	TIN	3.07 mg/Kg	3.07U mg/Kg
SL-096-SA8N-SB-9.0-10.0(RES)	TIN	3.15 mg/Kg	3.15U mg/Kg
SL-104-SA8N-SB-4.0-5.0(RES)	TIN	3.05 mg/Kg	3.05U mg/Kg
SL-104-SA8N-SB-9.0-10.0(RES)	TIN	3.65 mg/Kg	3.65U mg/Kg

Method: 8260B
Matrix: SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB57B210500A	5/17/2011 5:00:00 AM	METHYLENE CHLORIDE	0.55 ug/Kg	SL-094-SA8N-SB-4.0-5.0 SL-095-SA8N-SB-4.0-5.0 SL-096-SA8N-SB-4.0-5.0 SL-104-SA8N-SB-4.0-5.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-096-SA8N-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	4.6 ug/Kg	4.6U ug/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE150 **Laboratory: LL**

EDD Filename: DE150_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-094-SA8N-SB-4.0-5.0MS (SL-094-SA8N-SB-4.0-5.0 SL-094-SA8N-SB-7.5-8.5 SL-095-SA8N-SB-4.0-5.0 SL-096-SA8N-SB-4.0-5.0 SL-096-SA8N-SB-9.0-10.0 SL-104-SA8N-SB-4.0-5.0 SL-104-SA8N-SB-9.0-10.0)	FLUORIDE	46	-	80.00-120.00	-	FLUORIDE	J (all detects) UJ (all non-detects)

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-094-SA8N-SB-4.0-5.0MSD (SL-094-SA8N-SB-4.0-5.0)	BENZIDINE	-	31	35.00-141.00	31 (30.00)	BENZIDINE	J(all detects) UJ(all non-detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE150 **Laboratory: LL**

EDD Filename: DE150_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P13626AQ221000A (SL-094-SA8N-SB-4.0-5.0 SL -094-SA8N-SB-7.5-8.5 SL -095-SA8N-SB-4.0-5.0 SL -096-SA8N-SB-4.0-5.0 SL -096-SA8N-SB-9.0-10.0 SL -104-SA8N-SB-4.0-5.0 SL -104-SA8N-SB-9.0-10.0)	ANTIMONY	155	-	80.00-120.00	-	ANTIMONY	No Qual, SRM within QC limits

Method: 8270C SIM
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P8LDLCSQ261934 (SL-094-SA8N-SB-4.0-5.0 SL -094-SA8N-SB-7.5-8.5 SL -095-SA8N-SB-4.0-5.0 SL -096-SA8N-SB-4.0-5.0 SL -096-SA8N-SB-9.0-10.0 SL -104-SA8N-SB-4.0-5.0 SL -104-SA8N-SB-9.0-10.0)	BIS(2-ETHYLHEXYL)PHTHALAT	226	-	67.00-143.00	-	BIS(2-ETHYLHEXYL)PHTHALA	J(all detects)

Method: 8260B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
LCSB57Q210522A	N-BUTYLBENZENE	121	121	72.00-120.00	-	N-BUTYLBENZENE	J(all detects)
LCSB57Y210544A	N-PROPYLBENZENE	123	-	77.00-120.00	-	N-PROPYLBENZENE	
(SL-094-SA8N-SB-4.0-5.0 SL -095-SA8N-SB-4.0-5.0 SL -096-SA8N-SB-4.0-5.0 SL -104-SA8N-SB-4.0-5.0)	SEC-BUTYLBENZENE	125	125	75.00-120.00	-	SEC-BUTYLBENZENE	

Surrogate Outlier Report

Lab Reporting Batch ID: DE150 **Laboratory: LL**

EDD Filename: DE150_v1. **eQAPP Name: CDM_SSFL_110509**

Method: 8082
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-104-SA8N-SB-4.0-5.0	DECACHLOROBIPHENYL TETRACHLORO-M-XYLENE	140 140	45.00-120.00 53.00-139.00	All Target Analytes	J (all detects)
SL-104-SA8N-SB-9.0-10.0	DECACHLOROBIPHENYL	141	45.00-120.00	All Target Analytes	J(all detects)

Method: 8270C SIM
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-104-SA8N-SB-9.0-10.0	2-FLUOROBIPHENYL Nitrobenzene-d5 Terphenyl-d14	26 36 17	45.00-130.00 40.00-130.00 45.00-135.00	All Base/Neutral Target Analytes	J(all detects) UJ(all non-detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE150 Laboratory: LL

EDD Filename: DE150_v1. eQAPP Name: CDM_SSFL_110509

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-094-SA8N-SB-4.0-5.0	TIN	J	3.05	11.5	PQL	mg/Kg	J (all detects)
SL-094-SA8N-SB-7.5-8.5	TIN	J	3.25	11.3	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.19	5.66	PQL	mg/Kg	
SL-095-SA8N-SB-4.0-5.0	TIN	J	3.00	11.3	PQL	mg/Kg	J (all detects)
SL-096-SA8N-SB-4.0-5.0	TIN	J	3.07	11.6	PQL	mg/Kg	J (all detects)
SL-096-SA8N-SB-9.0-10.0	BORON	J	5.00	5.71	PQL	mg/Kg	J (all detects)
	TIN	J	3.15	11.4	PQL	mg/Kg	
	Zirconium	J	2.65	5.71	PQL	mg/Kg	
SL-104-SA8N-SB-4.0-5.0	TIN	J	3.05	11.3	PQL	mg/Kg	J (all detects)
	Zirconium	J	4.38	5.65	PQL	mg/Kg	
SL-104-SA8N-SB-9.0-10.0	BORON	J	4.77	5.74	PQL	mg/Kg	J (all detects)
	TIN	J	3.65	11.5	PQL	mg/Kg	
	Zirconium	J	4.51	5.74	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-094-SA8N-SB-4.0-5.0	SELENIUM	J	0.248	0.474	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0479	0.118	PQL	mg/Kg	
SL-094-SA8N-SB-7.5-8.5	ANTIMONY	J	0.0689	0.222	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.0740	0.111	PQL	mg/Kg	
	SELENIUM	J	0.0988	0.444	PQL	mg/Kg	
	SILVER	J	0.0560	0.111	PQL	mg/Kg	
SL-095-SA8N-SB-4.0-5.0	SELENIUM	J	0.0518	0.458	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0440	0.114	PQL	mg/Kg	
SL-096-SA8N-SB-4.0-5.0	SELENIUM	J	0.157	0.470	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0746	0.118	PQL	mg/Kg	
SL-096-SA8N-SB-9.0-10.0	ANTIMONY	J	0.104	0.224	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.177	0.448	PQL	mg/Kg	
	SILVER	J	0.0401	0.112	PQL	mg/Kg	
SL-104-SA8N-SB-4.0-5.0	ANTIMONY	J	0.141	0.224	PQL	mg/Kg	J (all detects)
	CADMIUM	J	0.0892	0.112	PQL	mg/Kg	
	SELENIUM	J	0.0680	0.448	PQL	mg/Kg	
	SILVER	J	0.0509	0.112	PQL	mg/Kg	
SL-104-SA8N-SB-9.0-10.0	SELENIUM	J	0.0526	0.473	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0203	0.118	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-094-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.46	1.2	PQL	mg/Kg	J (all detects)

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Reporting Limit Outliers

Lab Reporting Batch ID: DE150 Laboratory: LL

EDD Filename: DE150_v1. eQAPP Name: CDM_SSFL_110509

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-096-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.47	1.2	PQL	mg/Kg	J (all detects)
SL-104-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.38	1.1	PQL	mg/Kg	J (all detects)
SL-104-SA8N-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.37	1.2	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-095-SA8N-SB-4.0-5.0	MERCURY	J	0.0135	0.114	PQL	mg/Kg	J (all detects)
SL-096-SA8N-SB-9.0-10.0	MERCURY	J	0.0078	0.111	PQL	mg/Kg	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-095-SA8N-SB-4.0-5.0	AROCLOR 1254	J	0.94	2.0	PQL	ug/Kg	J (all detects)

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-096-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	21	390	PQL	ug/Kg	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-094-SA8N-SB-4.0-5.0	BENZO(B)FLUORANTHENE BIS(2-ETHYLHEXYL)PHTHALATE	J J	0.88 9.2	2.0 22	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-094-SA8N-SB-7.5-8.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	7.4	20	PQL	ug/Kg	J (all detects)
SL-095-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	7.7	21	PQL	ug/Kg	J (all detects)

LDC #: 26078J4 **VALIDATION COMPLETENESS WORKSHEET** Date: 8/29/11
SDG #: DE150 ADR Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: AR
2nd Reviewer: C

METHOD: Metals (EPA SW 846 Method 6010B/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates:
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	No quals for ICB/CCB
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	N	CS
VII.	Duplicate Sample Analysis	N	↓
VIII.	Laboratory Control Samples (LCS)	N	LCS
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	N	Not performed
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	—	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

1	SL-094-SA8N-SB-4.0-5.0	11		21		31	
2	SL-094-SA8N-SB-7.5-8.5	12		22		32	
3	SL-095-SA8N-SB-4.0-5.0	13		23		33	
4	SL-096-SA8N-SB-4.0-5.0	14		24		34	
5	SL-096-SA8N-SB-9.0-10.0	15		25		35	
6	SL-104-SA8N-SB-4.0-5.0	16		26		36	
7	SL-104-SA8N-SB-9.0-10.0	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

SAMPLE DELIVERY GROUP

DE165

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-May-2011	SL-001-SA8N-SB-4.0-5.0	6300332	N	3050B	6010B	III
26-May-2011	SL-001-SA8N-SB-4.0-5.0	6300332	N	3050B	6020	III
26-May-2011	SL-001-SA8N-SB-4.0-5.0	6300332	N	3060A	7199	III
26-May-2011	SL-001-SA8N-SB-4.0-5.0	6300332	N	3550B	8082	III
26-May-2011	SL-001-SA8N-SB-4.0-5.0	6300332	N	3550B	8270C	III
26-May-2011	SL-001-SA8N-SB-4.0-5.0	6300332	N	3550B	8270C SIM	III
26-May-2011	SL-001-SA8N-SB-4.0-5.0	6300332	N	5035	8260B	III
26-May-2011	SL-001-SA8N-SB-4.0-5.0	6300332	N	5035	8260B SIM	III
26-May-2011	SL-001-SA8N-SB-4.0-5.0	6300332	N	METHOD	300.0	III
26-May-2011	SL-001-SA8N-SB-4.0-5.0	6300332	N	METHOD	314.0	III
26-May-2011	SL-001-SA8N-SB-4.0-5.0	6300332	N	METHOD	7471A	III
26-May-2011	SL-001-SA8N-SB-4.0-5.0	6300332	N	METHOD	8015M	III
26-May-2011	SL-001-SA8N-SB-9.0-10.0	6300333	N	3050B	6010B	III
26-May-2011	SL-001-SA8N-SB-9.0-10.0	6300333	N	3050B	6020	III
26-May-2011	SL-001-SA8N-SB-9.0-10.0	6300333	N	3060A	7199	III
26-May-2011	SL-001-SA8N-SB-9.0-10.0	6300333	N	3550B	8082	III
26-May-2011	SL-001-SA8N-SB-9.0-10.0	6300333	N	3550B	8270C	III
26-May-2011	SL-001-SA8N-SB-9.0-10.0	6300333	N	3550B	8270C SIM	III
26-May-2011	SL-001-SA8N-SB-9.0-10.0	6300333	N	METHOD	300.0	III
26-May-2011	SL-001-SA8N-SB-9.0-10.0	6300333	N	METHOD	314.0	III
26-May-2011	SL-001-SA8N-SB-9.0-10.0	6300333	N	METHOD	6850	III
26-May-2011	SL-001-SA8N-SB-9.0-10.0	6300333	N	METHOD	7471A	III
26-May-2011	SL-001-SA8N-SB-9.0-10.0	6300333	N	METHOD	8015M	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE165 Laboratory: LL

EDD Filename: DE165_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-001-SA8N-SB-4.0-5.0 *Collected:* 5/26/2011 11:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	2.84	J	1.15	MDL	11.5	PQL	mg/Kg	U	B
Zirconium	4.28	J	0.963	MDL	5.73	PQL	mg/Kg	J	Z

Sample ID: SL-001-SA8N-SB-9.0-10.0 *Collected:* 5/26/2011 11:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	2.81	J	1.10	MDL	11.0	PQL	mg/Kg	U	B
Zirconium	1.88	J	0.926	MDL	5.51	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-001-SA8N-SB-4.0-5.0 *Collected:* 5/26/2011 11:05:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.112	J	0.0463	MDL	0.463	PQL	mg/Kg	J	Z

Sample ID: SL-001-SA8N-SB-4.0-5.0 *Collected:* 5/26/2011 11:05:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.416		0.0579	MDL	0.116	PQL	mg/Kg	J	E

Sample ID: SL-001-SA8N-SB-4.0-5.0 *Collected:* 5/26/2011 11:05:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.270		0.0694	MDL	0.231	PQL	mg/Kg	J	Q
ARSENIC	8.20		0.0926	MDL	0.463	PQL	mg/Kg	J	E
CHROMIUM	32.4		0.139	MDL	0.463	PQL	mg/Kg	J	A
LEAD	12.8		0.0120	MDL	0.231	PQL	mg/Kg	J	E
SILVER	0.0563	J	0.0139	MDL	0.116	PQL	mg/Kg	J	Z
VANADIUM	56.3		0.0255	MDL	0.116	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE165 **Laboratory:** LL

EDD Filename: DE165_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-001-SA8N-SB-9.0-10.0 *Collected:* 5/26/2011 11:35:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.218		0.0546	MDL	0.109	PQL	mg/Kg	J	E

Sample ID: SL-001-SA8N-SB-9.0-10.0 *Collected:* 5/26/2011 11:35:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.114	J	0.0655	MDL	0.218	PQL	mg/Kg	J	Z, Q
ARSENIC	5.41		0.0874	MDL	0.437	PQL	mg/Kg	J	E
CHROMIUM	17.4		0.131	MDL	0.437	PQL	mg/Kg	J	A
LEAD	5.81		0.0114	MDL	0.218	PQL	mg/Kg	J	E
SILVER	0.0205	J	0.0131	MDL	0.109	PQL	mg/Kg	J	Z
VANADIUM	34.7		0.0240	MDL	0.109	PQL	mg/Kg	J	A

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: SL-001-SA8N-SB-4.0-5.0 *Collected:* 5/26/2011 11:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.39	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-001-SA8N-SB-9.0-10.0 *Collected:* 5/26/2011 11:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.28	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7471A **Matrix:** SO

Sample ID: SL-001-SA8N-SB-4.0-5.0 *Collected:* 5/26/2011 11:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0106	J	0.0032	MDL	0.111	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE165 Laboratory: LL

EDD Filename: DE165_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-001-SA8N-SB-4.0-5.0 *Collected:* 5/26/2011 11:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	21	J	20	MDL	390	PQL	ug/Kg	J	Z

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-001-SA8N-SB-4.0-5.0 *Collected:* 5/26/2011 11:05:00 *Analysis Type:* RES *Dilution:* 0.93

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	9.8		7.3	MDL	8.8	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	2.0	J	0.26	MDL	4.4	PQL	ug/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE165 **Laboratory: LL**

EDD Filename: DE165_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision
E	Laboratory Triplicate Precision
E	Matrix Spike Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE165 **Laboratory: LL**

EDD Filename: DE165_v1 **eQAPP Name: CDM_SSFL_110509**

F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Laboratory Triplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE165 **Laboratory: LL**

EDD Filename: DE165_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE165

Method Blank Outlier Report

Lab Reporting Batch ID: DE165 **Laboratory: LL**

EDD Filename: DE165_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P15708BB220800	6/7/2011 8:00:00 AM	CALCIUM PHOSPHORUS TIN	6.81 mg/Kg 1.17 mg/Kg 1.38 mg/Kg	SL-001-SA8N-SB-4.0-5.0 SL-001-SA8N-SB-9.0-10.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-001-SA8N-SB-4.0-5.0(RES)	TIN	2.84 mg/Kg	2.84U mg/Kg
SL-001-SA8N-SB-9.0-10.0(RES)	TIN	2.81 mg/Kg	2.81U mg/Kg

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB72B211210A	6/1/2011 12:10:00 PM	ACETONE METHYLENE CHLORIDE	8.6 ug/Kg 1.4 ug/Kg	SL-001-SA8N-SB-4.0-5.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-001-SA8N-SB-4.0-5.0(RES)	ACETONE	9.8 ug/Kg	9.8U ug/Kg
SL-001-SA8N-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	2.0 ug/Kg	4.4U ug/Kg

Reporting Limit Outliers

Lab Reporting Batch ID: DE165 **Laboratory: LL**

EDD Filename: DE165_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-001-SA8N-SB-4.0-5.0	TIN	J	2.84	11.5	PQL	mg/Kg	J (all detects)
	Zirconium	J	4.28	5.73	PQL	mg/Kg	
SL-001-SA8N-SB-9.0-10.0	TIN	J	2.81	11.0	PQL	mg/Kg	J (all detects)
	Zirconium	J	1.88	5.51	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-001-SA8N-SB-4.0-5.0	SELENIUM	J	0.112	0.463	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0563	0.116	PQL	mg/Kg	
SL-001-SA8N-SB-9.0-10.0	ANTIMONY	J	0.114	0.218	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0205	0.109	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-001-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.39	1.2	PQL	mg/Kg	J (all detects)
SL-001-SA8N-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.28	1.1	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-001-SA8N-SB-4.0-5.0	MERCURY	J	0.0106	0.111	PQL	mg/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-001-SA8N-SB-4.0-5.0	METHYLENE CHLORIDE	J	2.0	4.4	PQL	ug/Kg	J (all detects)

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-001-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	21	390	PQL	ug/Kg	J (all detects)

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

LDC #: 26275W4 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/28/11
SDG #: DE165 ADR Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: MY
2nd Reviewer: CR

METHOD: Metals (EPA SW 846 Method 6010B/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates:
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	A	No qual.
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	SW	} DE164
VII.	Duplicate Sample Analysis	SW	
VIII.	Laboratory Control Samples (LCS)	NA	SRM
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	Cr, V
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	N	
XV	Field Blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

1	SL-001-SA8N-SB-4.0-5.0	11		21		31	
2	SL-001-SA8N-SB-9.0-10.0	12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

SAMPLE DELIVERY GROUP

DE166

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-May-2011	TB-052611	6300344	TB	5030B	8260B	III
26-May-2011	TB-052611	6300344	TB	5030B	8260B SIM	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5	6300354	N	3050B	6010B	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5	6300354	N	3050B	6020	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5	6300354	N	3060A	7199	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5	6300354	N	3546	1625C	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5	6300354	N	3550B	8015B	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5	6300354	N	3550B	8015M	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5	6300354	N	3550B	8081A	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5	6300354	N	3550B	8082	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5	6300354	N	3550B	8151A	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5	6300354	N	3550B	8270C	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5	6300354	N	3550B	8270C SIM	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5	6300354	N	8330	8330A	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5	6300354	N	METHOD	300.0	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5	6300354	N	METHOD	314.0	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5	6300354	N	METHOD	6850	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5	6300354	N	METHOD	7471A	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5	6300354	N	METHOD	8015B	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5	6300354	N	METHOD	8015M	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5	6300354	N	METHOD	8315A	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5	6300354	N	METHOD	9012B	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5DU	P300354D270911B	DUP	METHOD	9012B	III
26-May-2011	SL-179-SA5DN-SS-0.0-0.5MS	P300354R270915B	MS	METHOD	9012B	III
26-May-2011	SL-008-SA8N-SB-4.0-5.0	6300341	N	3050B	6010B	III
26-May-2011	SL-008-SA8N-SB-4.0-5.0	6300341	N	3050B	6020	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-May-2011	SL-008-SA8N-SB-4.0-5.0	6300341	N	3060A	7199	III
26-May-2011	SL-008-SA8N-SB-4.0-5.0	6300341	N	3550B	8082	III
26-May-2011	SL-008-SA8N-SB-4.0-5.0	6300341	N	3550B	8270C	III
26-May-2011	SL-008-SA8N-SB-4.0-5.0	6300341	N	3550B	8270C SIM	III
26-May-2011	SL-008-SA8N-SB-4.0-5.0	6300341	N	5035	8260B	III
26-May-2011	SL-008-SA8N-SB-4.0-5.0	6300341	N	5035	8260B SIM	III
26-May-2011	SL-008-SA8N-SB-4.0-5.0	6300341	N	METHOD	300.0	III
26-May-2011	SL-008-SA8N-SB-4.0-5.0	6300341	N	METHOD	314.0	III
26-May-2011	SL-008-SA8N-SB-4.0-5.0	6300341	N	METHOD	7471A	III
26-May-2011	SL-008-SA8N-SB-4.0-5.0	6300341	N	METHOD	8015M	III
26-May-2011	SL-172-SA5DN-SS-0.0-0.5	6300349	N	3050B	6010B	III
26-May-2011	SL-172-SA5DN-SS-0.0-0.5	6300349	N	3050B	6020	III
26-May-2011	SL-172-SA5DN-SS-0.0-0.5	6300349	N	3060A	7199	III
26-May-2011	SL-172-SA5DN-SS-0.0-0.5	6300349	N	3550B	8081A	III
26-May-2011	SL-172-SA5DN-SS-0.0-0.5	6300349	N	3550B	8082	III
26-May-2011	SL-172-SA5DN-SS-0.0-0.5	6300349	N	3550B	8151A	III
26-May-2011	SL-172-SA5DN-SS-0.0-0.5	6300349	N	3550B	8270C	III
26-May-2011	SL-172-SA5DN-SS-0.0-0.5	6300349	N	3550B	8270C SIM	III
26-May-2011	SL-172-SA5DN-SS-0.0-0.5	6300349	N	METHOD	300.0	III
26-May-2011	SL-172-SA5DN-SS-0.0-0.5	6300349	N	METHOD	314.0	III
26-May-2011	SL-172-SA5DN-SS-0.0-0.5	6300349	N	METHOD	7471A	III
26-May-2011	SL-171-SA5DN-SS-0.0-0.5	6300348	N	3050B	6010B	III
26-May-2011	SL-171-SA5DN-SS-0.0-0.5	6300348	N	3050B	6020	III
26-May-2011	SL-171-SA5DN-SS-0.0-0.5	6300348	N	3060A	7199	III
26-May-2011	SL-171-SA5DN-SS-0.0-0.5	6300348	N	3546	1625C	III
26-May-2011	SL-171-SA5DN-SS-0.0-0.5	6300348	N	3550B	8015B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-May-2011	SL-171-SA5DN-SS-0.0-0.5	6300348	N	3550B	8015M	III
26-May-2011	SL-171-SA5DN-SS-0.0-0.5	6300348	N	3550B	8081A	III
26-May-2011	SL-171-SA5DN-SS-0.0-0.5	6300348	N	3550B	8082	III
26-May-2011	SL-171-SA5DN-SS-0.0-0.5	6300348	N	3550B	8151A	III
26-May-2011	SL-171-SA5DN-SS-0.0-0.5	6300348	N	3550B	8270C	III
26-May-2011	SL-171-SA5DN-SS-0.0-0.5	6300348	N	3550B	8270C SIM	III
26-May-2011	SL-171-SA5DN-SS-0.0-0.5	6300348	N	8330	8330A	III
26-May-2011	SL-171-SA5DN-SS-0.0-0.5	6300348	N	METHOD	300.0	III
26-May-2011	SL-171-SA5DN-SS-0.0-0.5	6300348	N	METHOD	314.0	III
26-May-2011	SL-171-SA5DN-SS-0.0-0.5	6300348	N	METHOD	7471A	III
26-May-2011	SL-171-SA5DN-SS-0.0-0.5	6300348	N	METHOD	8015B	III
26-May-2011	SL-171-SA5DN-SS-0.0-0.5	6300348	N	METHOD	8015M	III
26-May-2011	SL-171-SA5DN-SS-0.0-0.5	6300348	N	METHOD	8315A	III
26-May-2011	SL-171-SA5DN-SS-0.0-0.5	6300348	N	METHOD	9012B	III
26-May-2011	SL-171-SA5DN-SS-0.0-0.5MS	P300348R320502A	MS	3550B	8015B	III
26-May-2011	SL-008-SA8N-SB-9.0-10.0	6300342	N	3050B	6010B	III
26-May-2011	SL-008-SA8N-SB-9.0-10.0	6300342	N	3050B	6020	III
26-May-2011	SL-008-SA8N-SB-9.0-10.0	6300342	N	3060A	7199	III
26-May-2011	SL-008-SA8N-SB-9.0-10.0	6300342	N	3550B	8082	III
26-May-2011	SL-008-SA8N-SB-9.0-10.0	6300342	N	3550B	8270C	III
26-May-2011	SL-008-SA8N-SB-9.0-10.0	6300342	N	3550B	8270C SIM	III
26-May-2011	SL-008-SA8N-SB-9.0-10.0	6300342	N	METHOD	300.0	III
26-May-2011	SL-008-SA8N-SB-9.0-10.0	6300342	N	METHOD	314.0	III
26-May-2011	SL-008-SA8N-SB-9.0-10.0	6300342	N	METHOD	7471A	III
26-May-2011	SL-008-SA8N-SB-9.0-10.0	6300342	N	METHOD	8015M	III
26-May-2011	SL-170-SA5DN-SS-0.0-0.5	6300347	N	3050B	6010B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-May-2011	SL-170-SA5DN-SS-0.0-0.5	6300347	N	3050B	6020	III
26-May-2011	SL-170-SA5DN-SS-0.0-0.5	6300347	N	3060A	7199	III
26-May-2011	SL-170-SA5DN-SS-0.0-0.5	6300347	N	3550B	8081A	III
26-May-2011	SL-170-SA5DN-SS-0.0-0.5	6300347	N	3550B	8082	III
26-May-2011	SL-170-SA5DN-SS-0.0-0.5	6300347	N	3550B	8151A	III
26-May-2011	SL-170-SA5DN-SS-0.0-0.5	6300347	N	3550B	8270C	III
26-May-2011	SL-170-SA5DN-SS-0.0-0.5	6300347	N	3550B	8270C SIM	III
26-May-2011	SL-170-SA5DN-SS-0.0-0.5	6300347	N	METHOD	300.0	III
26-May-2011	SL-170-SA5DN-SS-0.0-0.5	6300347	N	METHOD	314.0	III
26-May-2011	SL-170-SA5DN-SS-0.0-0.5	6300347	N	METHOD	7471A	III
26-May-2011	SL-173-SA5DN-SS-0.0-0.5	6300350	N	3050B	6010B	III
26-May-2011	SL-173-SA5DN-SS-0.0-0.5	6300350	N	3050B	6020	III
26-May-2011	SL-173-SA5DN-SS-0.0-0.5	6300350	N	3060A	7199	III
26-May-2011	SL-173-SA5DN-SS-0.0-0.5	6300350	N	3550B	8081A	III
26-May-2011	SL-173-SA5DN-SS-0.0-0.5	6300350	N	3550B	8082	III
26-May-2011	SL-173-SA5DN-SS-0.0-0.5	6300350	N	3550B	8151A	III
26-May-2011	SL-173-SA5DN-SS-0.0-0.5	6300350	N	3550B	8270C	III
26-May-2011	SL-173-SA5DN-SS-0.0-0.5	6300350	N	3550B	8270C SIM	III
26-May-2011	SL-173-SA5DN-SS-0.0-0.5	6300350	N	METHOD	300.0	III
26-May-2011	SL-173-SA5DN-SS-0.0-0.5	6300350	N	METHOD	314.0	III
26-May-2011	SL-173-SA5DN-SS-0.0-0.5	6300350	N	METHOD	7471A	III
26-May-2011	SL-173-SA5DN-SS-0.0-0.5DU	P300350D271020B	DUP	METHOD	314.0	III
26-May-2011	SL-173-SA5DN-SS-0.0-0.5DU	P300350D272337B	DUP	METHOD	300.0	III
26-May-2011	SL-173-SA5DN-SS-0.0-0.5MS	P300350R270018B	MS	METHOD	300.0	III
26-May-2011	SL-173-SA5DN-SS-0.0-0.5MS	P300350R271042B	MS	METHOD	314.0	III
26-May-2011	SL-174-SA5DN-SS-0.0-0.5	6300351	N	3050B	6010B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-May-2011	SL-174-SA5DN-SS-0.0-0.5	6300351	N	3050B	6020	III
26-May-2011	SL-174-SA5DN-SS-0.0-0.5	6300351	N	3060A	7199	III
26-May-2011	SL-174-SA5DN-SS-0.0-0.5	6300351	N	3550B	8081A	III
26-May-2011	SL-174-SA5DN-SS-0.0-0.5	6300351	N	3550B	8082	III
26-May-2011	SL-174-SA5DN-SS-0.0-0.5	6300351	N	3550B	8151A	III
26-May-2011	SL-174-SA5DN-SS-0.0-0.5	6300351	N	3550B	8270C	III
26-May-2011	SL-174-SA5DN-SS-0.0-0.5	6300351	N	3550B	8270C SIM	III
26-May-2011	SL-174-SA5DN-SS-0.0-0.5	6300351	N	METHOD	300.0	III
26-May-2011	SL-174-SA5DN-SS-0.0-0.5	6300351	N	METHOD	314.0	III
26-May-2011	SL-174-SA5DN-SS-0.0-0.5	6300351	N	METHOD	7471A	III
26-May-2011	SL-175-SA5DN-SS-0.0-0.5	6300352	N	3050B	6010B	III
26-May-2011	SL-175-SA5DN-SS-0.0-0.5	6300352	N	3050B	6020	III
26-May-2011	SL-175-SA5DN-SS-0.0-0.5	6300352	N	3060A	7199	III
26-May-2011	SL-175-SA5DN-SS-0.0-0.5	6300352	N	3546	1625C	III
26-May-2011	SL-175-SA5DN-SS-0.0-0.5	6300352	N	3550B	8015B	III
26-May-2011	SL-175-SA5DN-SS-0.0-0.5	6300352	N	3550B	8015M	III
26-May-2011	SL-175-SA5DN-SS-0.0-0.5	6300352	N	3550B	8081A	III
26-May-2011	SL-175-SA5DN-SS-0.0-0.5	6300352	N	3550B	8082	III
26-May-2011	SL-175-SA5DN-SS-0.0-0.5	6300352	N	3550B	8151A	III
26-May-2011	SL-175-SA5DN-SS-0.0-0.5	6300352	N	3550B	8270C	III
26-May-2011	SL-175-SA5DN-SS-0.0-0.5	6300352	N	3550B	8270C SIM	III
26-May-2011	SL-175-SA5DN-SS-0.0-0.5	6300352	N	8330	8330A	III
26-May-2011	SL-175-SA5DN-SS-0.0-0.5	6300352	N	METHOD	300.0	III
26-May-2011	SL-175-SA5DN-SS-0.0-0.5	6300352	N	METHOD	314.0	III
26-May-2011	SL-175-SA5DN-SS-0.0-0.5	6300352	N	METHOD	7471A	III
26-May-2011	SL-175-SA5DN-SS-0.0-0.5	6300352	N	METHOD	8015B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-May-2011	SL-175-SA5DN-SS-0.0-0.5	6300352	N	METHOD	8015M	III
26-May-2011	SL-175-SA5DN-SS-0.0-0.5	6300352	N	METHOD	8315A	III
26-May-2011	SL-175-SA5DN-SS-0.0-0.5	6300352	N	METHOD	9012B	III
26-May-2011	SL-175-SA5DN-SS-0.0-0.5MS	P300352R320238A	MS	METHOD	8015B	III
26-May-2011	SL-176-SA5DN-SS-0.0-0.5	6300353	N	3050B	6010B	III
26-May-2011	SL-176-SA5DN-SS-0.0-0.5	6300353	N	3050B	6020	III
26-May-2011	SL-176-SA5DN-SS-0.0-0.5	6300353	N	3060A	7199	III
26-May-2011	SL-176-SA5DN-SS-0.0-0.5	6300353	N	3550B	8081A	III
26-May-2011	SL-176-SA5DN-SS-0.0-0.5	6300353	N	3550B	8082	III
26-May-2011	SL-176-SA5DN-SS-0.0-0.5	6300353	N	3550B	8151A	III
26-May-2011	SL-176-SA5DN-SS-0.0-0.5	6300353	N	3550B	8270C	III
26-May-2011	SL-176-SA5DN-SS-0.0-0.5	6300353	N	3550B	8270C SIM	III
26-May-2011	SL-176-SA5DN-SS-0.0-0.5	6300353	N	METHOD	300.0	III
26-May-2011	SL-176-SA5DN-SS-0.0-0.5	6300353	N	METHOD	314.0	III
26-May-2011	SL-176-SA5DN-SS-0.0-0.5	6300353	N	METHOD	6850	III
26-May-2011	SL-176-SA5DN-SS-0.0-0.5	6300353	N	METHOD	7471A	III
26-May-2011	EB09-SA5DN-SS-052611	6300360	EB	3005A	6010B	III
26-May-2011	EB09-SA5DN-SS-052611	6300360	EB	3020A	6020	III
26-May-2011	EB09-SA5DN-SS-052611	6300360	EB	3510C	8015B	III
26-May-2011	EB09-SA5DN-SS-052611	6300360	EB	3510C	8015M	III
26-May-2011	EB09-SA5DN-SS-052611	6300360	EB	3510C	8081A	III
26-May-2011	EB09-SA5DN-SS-052611	6300360	EB	3510C	8082	III
26-May-2011	EB09-SA5DN-SS-052611	6300360	EB	3510C	8270C	III
26-May-2011	EB09-SA5DN-SS-052611	6300360	EB	3510C	8270C SIM	III
26-May-2011	EB09-SA5DN-SS-052611	6300360	EB	3520C	1625C	III
26-May-2011	EB09-SA5DN-SS-052611	6300360	EB	8330	8330A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-May-2011	EB09-SA5DN-SS-052611	6300360	EB	Gen Prep	300.0	III
26-May-2011	EB09-SA5DN-SS-052611	6300360	EB	Gen Prep	314.0	III
26-May-2011	EB09-SA5DN-SS-052611	6300360	EB	Gen Prep	7199	III
26-May-2011	EB09-SA5DN-SS-052611	6300360	EB	Gen Prep	8015B	III
26-May-2011	EB09-SA5DN-SS-052611	6300360	EB	Gen Prep	8015M	III
26-May-2011	EB09-SA5DN-SS-052611	6300360	EB	METHOD	7470A	III
26-May-2011	EB09-SA5DN-SS-052611	6300360	EB	METHOD	8151A	III
26-May-2011	EB09-SA5DN-SS-052611	6300360	EB	METHOD	8315A	III
26-May-2011	EB09-SA5DN-SS-052611	6300360	EB	METHOD	9012B	III
26-May-2011	EB11-SA8N-SB-052611	6300361	EB	3005A	6010B	III
26-May-2011	EB11-SA8N-SB-052611	6300361	EB	3020A	6020	III
26-May-2011	EB11-SA8N-SB-052611	6300361	EB	3510C	8082	III
26-May-2011	EB11-SA8N-SB-052611	6300361	EB	3510C	8270C	III
26-May-2011	EB11-SA8N-SB-052611	6300361	EB	3510C	8270C SIM	III
26-May-2011	EB11-SA8N-SB-052611	6300361	EB	5030B	8260B	III
26-May-2011	EB11-SA8N-SB-052611	6300361	EB	5030B	8260B SIM	III
26-May-2011	EB11-SA8N-SB-052611	6300361	EB	Gen Prep	300.0	III
26-May-2011	EB11-SA8N-SB-052611	6300361	EB	Gen Prep	314.0	III
26-May-2011	EB11-SA8N-SB-052611	6300361	EB	Gen Prep	7199	III
26-May-2011	EB11-SA8N-SB-052611	6300361	EB	METHOD	7470A	III
26-May-2011	SL-180-SA5DN-SS-0.0-0.5	6300355	N	3050B	6010B	III
26-May-2011	SL-180-SA5DN-SS-0.0-0.5	6300355	N	3050B	6020	III
26-May-2011	SL-180-SA5DN-SS-0.0-0.5	6300355	N	3060A	7199	III
26-May-2011	SL-180-SA5DN-SS-0.0-0.5	6300355	N	3550B	8081A	III
26-May-2011	SL-180-SA5DN-SS-0.0-0.5	6300355	N	3550B	8082	III
26-May-2011	SL-180-SA5DN-SS-0.0-0.5	6300355	N	3550B	8151A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-May-2011	SL-180-SA5DN-SS-0.0-0.5	6300355	N	3550B	8270C	III
26-May-2011	SL-180-SA5DN-SS-0.0-0.5	6300355	N	3550B	8270C SIM	III
26-May-2011	SL-180-SA5DN-SS-0.0-0.5	6300355	N	METHOD	300.0	III
26-May-2011	SL-180-SA5DN-SS-0.0-0.5	6300355	N	METHOD	314.0	III
26-May-2011	SL-180-SA5DN-SS-0.0-0.5	6300355	N	METHOD	6850	III
26-May-2011	SL-180-SA5DN-SS-0.0-0.5	6300355	N	METHOD	7471A	III
26-May-2011	SL-181-SA5DN-SS-0.0-0.5	6300356	N	3050B	6010B	III
26-May-2011	SL-181-SA5DN-SS-0.0-0.5	6300356	N	3050B	6020	III
26-May-2011	SL-181-SA5DN-SS-0.0-0.5	6300356	N	3060A	7199	III
26-May-2011	SL-181-SA5DN-SS-0.0-0.5	6300356	N	3550B	8081A	III
26-May-2011	SL-181-SA5DN-SS-0.0-0.5	6300356	N	3550B	8082	III
26-May-2011	SL-181-SA5DN-SS-0.0-0.5	6300356	N	3550B	8151A	III
26-May-2011	SL-181-SA5DN-SS-0.0-0.5	6300356	N	3550B	8270C	III
26-May-2011	SL-181-SA5DN-SS-0.0-0.5	6300356	N	3550B	8270C SIM	III
26-May-2011	SL-181-SA5DN-SS-0.0-0.5	6300356	N	METHOD	300.0	III
26-May-2011	SL-181-SA5DN-SS-0.0-0.5	6300356	N	METHOD	314.0	III
26-May-2011	SL-181-SA5DN-SS-0.0-0.5	6300356	N	METHOD	6850	III
26-May-2011	SL-181-SA5DN-SS-0.0-0.5	6300356	N	METHOD	7471A	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0	6300336	N	3050B	6010B	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0	6300336	N	3050B	6020	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0	6300336	N	3060A	7199	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0	6300336	N	3550B	8082	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0	6300336	N	3550B	8270C	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0	6300336	N	3550B	8270C SIM	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0	6300336	N	5035	8260B	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0	6300336	N	5035	8260B SIM	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-May-2011	SL-002-SA8N-SB-4.0-5.0	6300336	N	METHOD	300.0	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0	6300336	N	METHOD	314.0	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0	6300336	N	METHOD	7471A	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0	6300336	N	METHOD	8015M	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0MS	6300337	MS	3050B	6010B	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0MS	6300337	MS	3050B	6020	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0MS	6300337	MS	3060A	7199	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0MS	6300337	MS	3550B	8082	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0MS	6300337	MS	3550B	8270C	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0MS	6300337	MS	3550B	8270C SIM	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0MS	6300337	MS	5035	8260B	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0MS	6300337	MS	5035	8260B SIM	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0MS	6300337	MS	METHOD	314.0	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0MS	6300337	MS	METHOD	7471A	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0MS	6300337	MS	METHOD	8015M	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0MSD	6300338	MSD	3050B	6010B	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0MSD	6300338	MSD	3050B	6020	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0MSD	6300338	MSD	3550B	8082	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0MSD	6300338	MSD	3550B	8270C	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0MSD	6300338	MSD	3550B	8270C SIM	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0MSD	6300338	MSD	5035	8260B	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0MSD	6300338	MSD	5035	8260B SIM	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0MSD	6300338	MSD	METHOD	7471A	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0MSD	6300338	MSD	METHOD	8015M	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0DUP	6300339	DUP	3050B	6010B	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0DUP	6300339	DUP	3050B	6020	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-May-2011	SL-002-SA8N-SB-4.0-5.0DUP	6300339	DUP	3060A	7199	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0DUP	6300339	DUP	METHOD	300.0	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0DUP	6300339	DUP	METHOD	314.0	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0DUP	6300339	DUP	METHOD	7471A	III
26-May-2011	SL-002-SA8N-SB-4.0-5.0MS	P300336R272039A	MS	METHOD	300.0	III
26-May-2011	SL-182-SA5DN-SS-0.0-0.5	6300357	N	3050B	6010B	III
26-May-2011	SL-182-SA5DN-SS-0.0-0.5	6300357	N	3050B	6020	III
26-May-2011	SL-182-SA5DN-SS-0.0-0.5	6300357	N	3060A	7199	III
26-May-2011	SL-182-SA5DN-SS-0.0-0.5	6300357	N	3550B	8081A	III
26-May-2011	SL-182-SA5DN-SS-0.0-0.5	6300357	N	3550B	8082	III
26-May-2011	SL-182-SA5DN-SS-0.0-0.5	6300357	N	3550B	8151A	III
26-May-2011	SL-182-SA5DN-SS-0.0-0.5	6300357	N	3550B	8270C	III
26-May-2011	SL-182-SA5DN-SS-0.0-0.5	6300357	N	3550B	8270C SIM	III
26-May-2011	SL-182-SA5DN-SS-0.0-0.5	6300357	N	METHOD	300.0	III
26-May-2011	SL-182-SA5DN-SS-0.0-0.5	6300357	N	METHOD	314.0	III
26-May-2011	SL-182-SA5DN-SS-0.0-0.5	6300357	N	METHOD	6850	III
26-May-2011	SL-182-SA5DN-SS-0.0-0.5	6300357	N	METHOD	7471A	III
26-May-2011	DUP09-SA8N-QC-052611	6300343	FD	3050B	6010B	III
26-May-2011	DUP09-SA8N-QC-052611	6300343	FD	3050B	6020	III
26-May-2011	DUP09-SA8N-QC-052611	6300343	FD	3060A	7199	III
26-May-2011	DUP09-SA8N-QC-052611	6300343	FD	3550B	8082	III
26-May-2011	DUP09-SA8N-QC-052611	6300343	FD	3550B	8270C	III
26-May-2011	DUP09-SA8N-QC-052611	6300343	FD	3550B	8270C SIM	III
26-May-2011	DUP09-SA8N-QC-052611	6300343	FD	5035	8260B	III
26-May-2011	DUP09-SA8N-QC-052611	6300343	FD	5035	8260B SIM	III
26-May-2011	DUP09-SA8N-QC-052611	6300343	FD	METHOD	300.0	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-May-2011	DUP09-SA8N-QC-052611	6300343	FD	METHOD	314.0	III
26-May-2011	DUP09-SA8N-QC-052611	6300343	FD	METHOD	7471A	III
26-May-2011	DUP09-SA8N-QC-052611	6300343	FD	METHOD	8015M	III
26-May-2011	SL-183-SA5DN-SS-0.0-0.5	6300358	N	3050B	6010B	III
26-May-2011	SL-183-SA5DN-SS-0.0-0.5	6300358	N	3050B	6020	III
26-May-2011	SL-183-SA5DN-SS-0.0-0.5	6300358	N	3060A	7199	III
26-May-2011	SL-183-SA5DN-SS-0.0-0.5	6300358	N	3550B	8081A	III
26-May-2011	SL-183-SA5DN-SS-0.0-0.5	6300358	N	3550B	8082	III
26-May-2011	SL-183-SA5DN-SS-0.0-0.5	6300358	N	3550B	8151A	III
26-May-2011	SL-183-SA5DN-SS-0.0-0.5	6300358	N	3550B	8270C	III
26-May-2011	SL-183-SA5DN-SS-0.0-0.5	6300358	N	3550B	8270C SIM	III
26-May-2011	SL-183-SA5DN-SS-0.0-0.5	6300358	N	METHOD	300.0	III
26-May-2011	SL-183-SA5DN-SS-0.0-0.5	6300358	N	METHOD	314.0	III
26-May-2011	SL-183-SA5DN-SS-0.0-0.5	6300358	N	METHOD	6850	III
26-May-2011	SL-183-SA5DN-SS-0.0-0.5	6300358	N	METHOD	7471A	III
26-May-2011	SL-002-SA8N-SB-9.0-10.0	6300340	N	3050B	6010B	III
26-May-2011	SL-002-SA8N-SB-9.0-10.0	6300340	N	3050B	6020	III
26-May-2011	SL-002-SA8N-SB-9.0-10.0	6300340	N	3060A	7199	III
26-May-2011	SL-002-SA8N-SB-9.0-10.0	6300340	N	3550B	8082	III
26-May-2011	SL-002-SA8N-SB-9.0-10.0	6300340	N	3550B	8270C	III
26-May-2011	SL-002-SA8N-SB-9.0-10.0	6300340	N	3550B	8270C SIM	III
26-May-2011	SL-002-SA8N-SB-9.0-10.0	6300340	N	METHOD	300.0	III
26-May-2011	SL-002-SA8N-SB-9.0-10.0	6300340	N	METHOD	314.0	III
26-May-2011	SL-002-SA8N-SB-9.0-10.0	6300340	N	METHOD	7471A	III
26-May-2011	SL-002-SA8N-SB-9.0-10.0	6300340	N	METHOD	8015M	III
26-May-2011	SL-184-SA5DN-SS-0.0-0.5	6300359	N	3050B	6010B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-May-2011	SL-184-SA5DN-SS-0.0-0.5	6300359	N	3050B	6020	III
26-May-2011	SL-184-SA5DN-SS-0.0-0.5	6300359	N	3060A	7199	III
26-May-2011	SL-184-SA5DN-SS-0.0-0.5	6300359	N	3550B	8081A	III
26-May-2011	SL-184-SA5DN-SS-0.0-0.5	6300359	N	3550B	8082	III
26-May-2011	SL-184-SA5DN-SS-0.0-0.5	6300359	N	3550B	8151A	III
26-May-2011	SL-184-SA5DN-SS-0.0-0.5	6300359	N	3550B	8270C	III
26-May-2011	SL-184-SA5DN-SS-0.0-0.5	6300359	N	3550B	8270C SIM	III
26-May-2011	SL-184-SA5DN-SS-0.0-0.5	6300359	N	METHOD	300.0	III
26-May-2011	SL-184-SA5DN-SS-0.0-0.5	6300359	N	METHOD	314.0	III
26-May-2011	SL-184-SA5DN-SS-0.0-0.5	6300359	N	METHOD	6850	III
26-May-2011	SL-184-SA5DN-SS-0.0-0.5	6300359	N	METHOD	7471A	III
26-May-2011	SL-165-SA5DN-SS-0.0-0.5	6300346	N	3050B	6010B	III
26-May-2011	SL-165-SA5DN-SS-0.0-0.5	6300346	N	3050B	6020	III
26-May-2011	SL-165-SA5DN-SS-0.0-0.5	6300346	N	3060A	7199	III
26-May-2011	SL-165-SA5DN-SS-0.0-0.5	6300346	N	3550B	8081A	III
26-May-2011	SL-165-SA5DN-SS-0.0-0.5	6300346	N	3550B	8082	III
26-May-2011	SL-165-SA5DN-SS-0.0-0.5	6300346	N	3550B	8151A	III
26-May-2011	SL-165-SA5DN-SS-0.0-0.5	6300346	N	3550B	8270C	III
26-May-2011	SL-165-SA5DN-SS-0.0-0.5	6300346	N	3550B	8270C SIM	III
26-May-2011	SL-165-SA5DN-SS-0.0-0.5	6300346	N	METHOD	300.0	III
26-May-2011	SL-165-SA5DN-SS-0.0-0.5	6300346	N	METHOD	314.0	III
26-May-2011	SL-165-SA5DN-SS-0.0-0.5	6300346	N	METHOD	7471A	III
26-May-2011	SL-164-SA5DN-SS-0.0-0.5	6300345	N	3050B	6010B	III
26-May-2011	SL-164-SA5DN-SS-0.0-0.5	6300345	N	3050B	6020	III
26-May-2011	SL-164-SA5DN-SS-0.0-0.5	6300345	N	3060A	7199	III
26-May-2011	SL-164-SA5DN-SS-0.0-0.5	6300345	N	3550B	8081A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-May-2011	SL-164-SA5DN-SS-0.0-0.5	6300345	N	3550B	8082	III
26-May-2011	SL-164-SA5DN-SS-0.0-0.5	6300345	N	3550B	8151A	III
26-May-2011	SL-164-SA5DN-SS-0.0-0.5	6300345	N	3550B	8270C	III
26-May-2011	SL-164-SA5DN-SS-0.0-0.5	6300345	N	3550B	8270C SIM	III
26-May-2011	SL-164-SA5DN-SS-0.0-0.5	6300345	N	METHOD	300.0	III
26-May-2011	SL-164-SA5DN-SS-0.0-0.5	6300345	N	METHOD	314.0	III
26-May-2011	SL-164-SA5DN-SS-0.0-0.5	6300345	N	METHOD	7471A	III
26-May-2011	SL-164-SA5DN-SS-0.0-0.5MS	P300345R240512A	MS	3550B	8081A	III
26-May-2011	SL-164-SA5DN-SS-0.0-0.5MS	P300345R242058A	MS	3550B	8151A	III

III = EPA Level 3 Data Review
IV = EPA Level 4 Data Validation
N = Normal Sample
FD = Field Duplicate
TB = Trip Blank
FB = Field Blank
MS = Matrix Spike
MSD = Matrix Spike Duplicate

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE166 Laboratory: LL

EDD Filename: PrepDE166_v1 eQAPP Name: CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: DUP09-SA8N-QC-052611 *Collected:* 5/26/2011 2:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.3		0.94	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-002-SA8N-SB-4.0-5.0 *Collected:* 5/26/2011 2:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.6		0.96	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-002-SA8N-SB-9.0-10.0 *Collected:* 5/26/2011 2:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	5.3		0.94	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-008-SA8N-SB-4.0-5.0 *Collected:* 5/26/2011 9:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.8		0.95	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-008-SA8N-SB-9.0-10.0 *Collected:* 5/26/2011 9:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	5.2		0.92	MDL	1.2	PQL	mg/Kg	J	Q

Sample ID: SL-164-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.1	J	0.88	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-165-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.1		0.86	MDL	1.1	PQL	mg/Kg	J	Q

Sample ID: SL-170-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.82	U	0.82	MDL	1.0	PQL	mg/Kg	UJ	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory:** LL

EDD Filename: PrepDE166_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-171-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 9:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.85	U	0.85	MDL	1.1	PQL	mg/Kg	UJ	Q
Nitrate-NO3	1.3	J	0.85	MDL	1.6	PQL	mg/Kg	J	Z

Sample ID: SL-172-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 9:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.1	J	0.86	MDL	1.1	PQL	mg/Kg	J	Q

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: DUP09-SA8N-QC-052611 *Collected:* 5/26/2011 2:45:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3730		20.8	MDL	57.9	PQL	mg/Kg	J	Q
TIN	2.64	J	1.16	MDL	11.6	PQL	mg/Kg	U	B
Zirconium	3.92	J	0.972	MDL	5.79	PQL	mg/Kg	J	Z

Sample ID: SL-002-SA8N-SB-4.0-5.0 *Collected:* 5/26/2011 2:20:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3770		21.5	MDL	59.7	PQL	mg/Kg	J	Q
TIN	2.72	J	1.19	MDL	11.9	PQL	mg/Kg	U	B
Zirconium	4.41	J	1.00	MDL	5.97	PQL	mg/Kg	J	Z

Sample ID: SL-002-SA8N-SB-9.0-10.0 *Collected:* 5/26/2011 2:50:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3010		21.0	MDL	58.4	PQL	mg/Kg	J	Q
TIN	2.44	J	1.17	MDL	11.7	PQL	mg/Kg	U	B
Zirconium	3.57	J	0.981	MDL	5.84	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory:** LL

EDD Filename: PrepDE166_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-008-SA8N-SB-4.0-5.0 *Collected:* 5/26/2011 9:15:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	4750		20.6	MDL	57.2	PQL	mg/Kg	J	Q
TIN	2.53	J	1.14	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	3.48	J	0.960	MDL	5.72	PQL	mg/Kg	J	Z

Sample ID: SL-008-SA8N-SB-9.0-10.0 *Collected:* 5/26/2011 9:40:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.46	J	1.01	MDL	5.65	PQL	mg/Kg	J	Z
POTASSIUM	2830		20.3	MDL	56.5	PQL	mg/Kg	J	Q
TIN	2.65	J	1.13	MDL	11.3	PQL	mg/Kg	U	B
Zirconium	2.78	J	0.949	MDL	5.65	PQL	mg/Kg	J	Z

Sample ID: SL-164-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:55:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	4800		19.4	MDL	53.9	PQL	mg/Kg	J	Q
SODIUM	67.9	J	40.2	MDL	108	PQL	mg/Kg	J	Z
TIN	2.45	J	1.08	MDL	10.8	PQL	mg/Kg	U	B
Zirconium	3.03	J	0.905	MDL	5.39	PQL	mg/Kg	J	Z

Sample ID: SL-165-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:30:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3760		19.0	MDL	52.7	PQL	mg/Kg	J	Q
SODIUM	75.2	J	39.3	MDL	105	PQL	mg/Kg	J	Z
TIN	2.37	J	1.05	MDL	10.5	PQL	mg/Kg	U	B
Zirconium	2.07	J	0.886	MDL	5.27	PQL	mg/Kg	J	Z

Sample ID: SL-170-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:00:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.06	J	0.890	MDL	5.00	PQL	mg/Kg	J	Z
POTASSIUM	2890		18.0	MDL	50.0	PQL	mg/Kg	J	Q
SODIUM	56.5	J	37.3	MDL	100	PQL	mg/Kg	J	Z
TIN	2.23	J	1.00	MDL	10.0	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 Laboratory: LL

EDD Filename: PrepDE166_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-170-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:00:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Zirconium	0.906	J	0.840	MDL	5.00	PQL	mg/Kg	J	Z

Sample ID: SL-171-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 9:35:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.71	J	0.928	MDL	5.21	PQL	mg/Kg	J	Z
POTASSIUM	4130		18.8	MDL	52.1	PQL	mg/Kg	J	Q
SODIUM	82.3	J	38.9	MDL	104	PQL	mg/Kg	J	Z
TIN	2.24	J	1.04	MDL	10.4	PQL	mg/Kg	U	B

Sample ID: SL-172-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 9:25:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.94	J	0.932	MDL	5.24	PQL	mg/Kg	J	Z
POTASSIUM	3020		18.9	MDL	52.4	PQL	mg/Kg	J	Q
SODIUM	91.7	J	39.1	MDL	105	PQL	mg/Kg	J	Z
TIN	2.17	J	1.05	MDL	10.5	PQL	mg/Kg	U	B
Zirconium	3.31	J	0.880	MDL	5.24	PQL	mg/Kg	J	Z

Sample ID: SL-173-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:20:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	2.90	J	0.909	MDL	5.10	PQL	mg/Kg	J	Z
POTASSIUM	2820		18.4	MDL	51.0	PQL	mg/Kg	J	Q
SODIUM	63.1	J	38.1	MDL	102	PQL	mg/Kg	J	Z
TIN	2.37	J	1.02	MDL	10.2	PQL	mg/Kg	U	B

Sample ID: SL-174-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:53:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	2.86	J	0.908	MDL	5.10	PQL	mg/Kg	J	Z
POTASSIUM	4290		18.4	MDL	51.0	PQL	mg/Kg	J	Q
TIN	2.34	J	1.02	MDL	10.2	PQL	mg/Kg	U	B
Zirconium	1.27	J	0.857	MDL	5.10	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: PrepDE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-175-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 11:15:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.38	J	0.927	MDL	5.21	PQL	mg/Kg	J	Z
POTASSIUM	3070		18.8	MDL	52.1	PQL	mg/Kg	J	Q
SODIUM	66.4	J	38.9	MDL	104	PQL	mg/Kg	J	Z
TIN	2.16	J	1.04	MDL	10.4	PQL	mg/Kg	U	B
Zirconium	1.33	J	0.875	MDL	5.21	PQL	mg/Kg	J	Z

Sample ID: SL-176-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 11:35:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	2.60	J	0.891	MDL	5.01	PQL	mg/Kg	J	Z
POTASSIUM	2560		18.0	MDL	50.1	PQL	mg/Kg	J	Q
SODIUM	61.7	J	37.4	MDL	100	PQL	mg/Kg	J	Z
TIN	4.84	J	1.00	MDL	10.0	PQL	mg/Kg	U	B
Zirconium	1.06	J	0.841	MDL	5.01	PQL	mg/Kg	J	Z

Sample ID: SL-179-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 8:50:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.23	J	0.933	MDL	5.24	PQL	mg/Kg	J	Z
POTASSIUM	3040		18.9	MDL	52.4	PQL	mg/Kg	J	Q
SODIUM	72.2	J	39.1	MDL	105	PQL	mg/Kg	J	Z
TIN	2.39	J	1.05	MDL	10.5	PQL	mg/Kg	U	B
Zirconium	1.76	J	0.881	MDL	5.24	PQL	mg/Kg	J	Z

Sample ID: SL-180-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 1:45:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.69	J	0.912	MDL	5.12	PQL	mg/Kg	J	Z
POTASSIUM	3170		18.4	MDL	51.2	PQL	mg/Kg	J	Q
SODIUM	84.5	J	38.2	MDL	102	PQL	mg/Kg	J	Z
TIN	2.40	J	1.02	MDL	10.2	PQL	mg/Kg	U	B
Zirconium	1.67	J	0.861	MDL	5.12	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory:** LL

EDD Filename: PrepDE166_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-181-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:00:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.59	J	0.912	MDL	5.13	PQL	mg/Kg	J	Z
POTASSIUM	3450		18.5	MDL	51.3	PQL	mg/Kg	J	Q
SODIUM	82.8	J	38.2	MDL	103	PQL	mg/Kg	J	Z
TIN	2.27	J	1.03	MDL	10.3	PQL	mg/Kg	U	B
Zirconium	1.90	J	0.861	MDL	5.13	PQL	mg/Kg	J	Z

Sample ID: SL-182-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:25:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.95	J	0.917	MDL	5.15	PQL	mg/Kg	J	Z
POTASSIUM	3190		18.6	MDL	51.5	PQL	mg/Kg	J	Q
SODIUM	96.7	J	38.4	MDL	103	PQL	mg/Kg	J	Z
TIN	2.15	J	1.03	MDL	10.3	PQL	mg/Kg	U	B
Zirconium	1.92	J	0.866	MDL	5.15	PQL	mg/Kg	J	Z

Sample ID: SL-183-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:45:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.11	J	0.886	MDL	4.98	PQL	mg/Kg	J	Z
POTASSIUM	3140		17.9	MDL	49.8	PQL	mg/Kg	J	Q
TIN	2.44	J	0.996	MDL	9.96	PQL	mg/Kg	U	B

Sample ID: SL-184-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:05:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.51	J	0.908	MDL	5.10	PQL	mg/Kg	J	Z
POTASSIUM	3200		18.4	MDL	51.0	PQL	mg/Kg	J	Q
SODIUM	78.2	J	38.1	MDL	102	PQL	mg/Kg	J	Z
TIN	2.19	J	1.02	MDL	10.2	PQL	mg/Kg	U	B
Zirconium	1.87	J	0.857	MDL	5.10	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory:** LL

EDD Filename: PrepDE166_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** AQ

Sample ID: EB09-SA5DN-SS-052611 *Collected:* 5/26/2011 12:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	0.000071	J	0.000052	MDL	0.0010	PQL	mg/L	U	B

Sample ID: EB11-SA8N-SB-052611 *Collected:* 5/26/2011 1:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	0.000062	J	0.000052	MDL	0.0010	PQL	mg/L	U	B

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: DUP09-SA8N-QC-052611 *Collected:* 5/26/2011 2:45:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.129	J	0.0675	MDL	0.225	PQL	mg/Kg	J	Z, Q
LEAD	11.7		0.0117	MDL	0.225	PQL	mg/Kg	J	Q, A
SILVER	0.0304	J	0.0135	MDL	0.112	PQL	mg/Kg	J	Z

Sample ID: DUP09-SA8N-QC-052611 *Collected:* 5/26/2011 2:45:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	6.89		0.0900	MDL	0.450	PQL	mg/Kg	J	Q
CHROMIUM	33.6		0.135	MDL	0.450	PQL	mg/Kg	J	Q, A
NICKEL	28.5		0.112	MDL	0.450	PQL	mg/Kg	J	Q
VANADIUM	68.6		0.0247	MDL	0.112	PQL	mg/Kg	J	A

Sample ID: DUP09-SA8N-QC-052611 *Collected:* 5/26/2011 2:45:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.140	J	0.0450	MDL	0.450	PQL	mg/Kg	J	Z

Sample ID: DUP09-SA8N-QC-052611 *Collected:* 5/26/2011 2:45:00 *Analysis Type:* REA9 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	129		0.121	MDL	0.450	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory:** LL

EDD Filename: PrepDE166_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-002-SA8N-SB-4.0-5.0 ***Collected:*** 5/26/2011 2:20:00 ***Analysis Type:*** REA5 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.140	J	0.0683	MDL	0.228	PQL	mg/Kg	J	Z, Q
LEAD	10.2		0.0118	MDL	0.228	PQL	mg/Kg	J	Q, A
SILVER	0.0264	J	0.0137	MDL	0.114	PQL	mg/Kg	J	Z

Sample ID: SL-002-SA8N-SB-4.0-5.0 ***Collected:*** 5/26/2011 2:20:00 ***Analysis Type:*** REA6 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	6.98		0.0910	MDL	0.455	PQL	mg/Kg	J	Q
CHROMIUM	31.8		0.137	MDL	0.455	PQL	mg/Kg	J	Q, A
NICKEL	23.0		0.114	MDL	0.455	PQL	mg/Kg	J	Q
VANADIUM	63.9		0.0250	MDL	0.114	PQL	mg/Kg	J	A

Sample ID: SL-002-SA8N-SB-4.0-5.0 ***Collected:*** 5/26/2011 2:20:00 ***Analysis Type:*** REA7 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.147	J	0.0455	MDL	0.455	PQL	mg/Kg	J	Z

Sample ID: SL-002-SA8N-SB-4.0-5.0 ***Collected:*** 5/26/2011 2:20:00 ***Analysis Type:*** REA9 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	113		0.123	MDL	0.455	PQL	mg/Kg	J	A

Sample ID: SL-002-SA8N-SB-9.0-10.0 ***Collected:*** 5/26/2011 2:50:00 ***Analysis Type:*** REA5 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.139	J	0.0701	MDL	0.234	PQL	mg/Kg	J	Z, Q
LEAD	11.5		0.0121	MDL	0.234	PQL	mg/Kg	J	Q, A
SILVER	0.0453	J	0.0140	MDL	0.117	PQL	mg/Kg	J	Z

Sample ID: SL-002-SA8N-SB-9.0-10.0 ***Collected:*** 5/26/2011 2:50:00 ***Analysis Type:*** REA6 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	6.73		0.0934	MDL	0.467	PQL	mg/Kg	J	Q
CHROMIUM	33.3		0.140	MDL	0.467	PQL	mg/Kg	J	Q, A
NICKEL	24.6		0.117	MDL	0.467	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory:** LL

EDD Filename: PrepDE166_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-002-SA8N-SB-9.0-10.0 *Collected:* 5/26/2011 2:50:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
VANADIUM	65.9		0.0257	MDL	0.117	PQL	mg/Kg	J	A

Sample ID: SL-002-SA8N-SB-9.0-10.0 *Collected:* 5/26/2011 2:50:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0898	J	0.0467	MDL	0.467	PQL	mg/Kg	J	Z

Sample ID: SL-002-SA8N-SB-9.0-10.0 *Collected:* 5/26/2011 2:50:00 *Analysis Type:* REA9 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	117		0.126	MDL	0.467	PQL	mg/Kg	J	A

Sample ID: SL-008-SA8N-SB-4.0-5.0 *Collected:* 5/26/2011 9:15:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.128	J	0.0686	MDL	0.229	PQL	mg/Kg	J	Z, Q
LEAD	8.93		0.0119	MDL	0.229	PQL	mg/Kg	J	Q, A
SILVER	0.0372	J	0.0137	MDL	0.114	PQL	mg/Kg	J	Z

Sample ID: SL-008-SA8N-SB-4.0-5.0 *Collected:* 5/26/2011 9:15:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	6.32		0.0915	MDL	0.457	PQL	mg/Kg	J	Q
CHROMIUM	29.8		0.137	MDL	0.457	PQL	mg/Kg	J	Q, A
NICKEL	19.2		0.114	MDL	0.457	PQL	mg/Kg	J	Q
VANADIUM	56.6		0.0252	MDL	0.114	PQL	mg/Kg	J	A

Sample ID: SL-008-SA8N-SB-4.0-5.0 *Collected:* 5/26/2011 9:15:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.125	J	0.0457	MDL	0.457	PQL	mg/Kg	J	Z

Sample ID: SL-008-SA8N-SB-4.0-5.0 *Collected:* 5/26/2011 9:15:00 *Analysis Type:* REA9 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	100		0.123	MDL	0.457	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory:** LL

EDD Filename: PrepDE166_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-008-SA8N-SB-9.0-10.0 *Collected:* 5/26/2011 9:40:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0814	J	0.0671	MDL	0.224	PQL	mg/Kg	J	Z, Q
LEAD	6.58		0.0116	MDL	0.224	PQL	mg/Kg	J	Q, A
SILVER	0.0394	J	0.0134	MDL	0.112	PQL	mg/Kg	J	Z

Sample ID: SL-008-SA8N-SB-9.0-10.0 *Collected:* 5/26/2011 9:40:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	5.39		0.0895	MDL	0.447	PQL	mg/Kg	J	Q
CHROMIUM	25.5		0.134	MDL	0.447	PQL	mg/Kg	J	Q, A
NICKEL	17.2		0.112	MDL	0.447	PQL	mg/Kg	J	Q
VANADIUM	49.5		0.0246	MDL	0.112	PQL	mg/Kg	J	A

Sample ID: SL-008-SA8N-SB-9.0-10.0 *Collected:* 5/26/2011 9:40:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0529	J	0.0447	MDL	0.447	PQL	mg/Kg	J	Z

Sample ID: SL-008-SA8N-SB-9.0-10.0 *Collected:* 5/26/2011 9:40:00 *Analysis Type:* REA9 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	86.3		0.121	MDL	0.447	PQL	mg/Kg	J	A

Sample ID: SL-164-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:55:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.179	J	0.0640	MDL	0.213	PQL	mg/Kg	J	Z, Q
LEAD	11.4		0.0111	MDL	0.213	PQL	mg/Kg	J	Q, A
SILVER	0.0410	J	0.0128	MDL	0.107	PQL	mg/Kg	J	Z

Sample ID: SL-164-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:55:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	10.1		0.0854	MDL	0.427	PQL	mg/Kg	J	Q
CHROMIUM	24.5		0.128	MDL	0.427	PQL	mg/Kg	J	Q, A
NICKEL	18.5		0.107	MDL	0.427	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 Laboratory: LL

EDD Filename: PrepDE166_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-164-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:55:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
VANADIUM	48.7		0.0235	MDL	0.107	PQL	mg/Kg	J	A

Sample ID: SL-164-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:55:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.221	J	0.0427	MDL	0.427	PQL	mg/Kg	J	Z

Sample ID: SL-164-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:55:00 *Analysis Type:* REA9 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	106		0.115	MDL	0.427	PQL	mg/Kg	J	A

Sample ID: SL-165-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:30:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0721	J	0.0626	MDL	0.209	PQL	mg/Kg	J	Z, Q
LEAD	9.29		0.0109	MDL	0.209	PQL	mg/Kg	J	Q, A
SILVER	0.0647	J	0.0125	MDL	0.104	PQL	mg/Kg	J	Z

Sample ID: SL-165-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:30:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	5.30		0.0835	MDL	0.418	PQL	mg/Kg	J	Q
CHROMIUM	21.7		0.125	MDL	0.418	PQL	mg/Kg	J	Q, A
NICKEL	15.4		0.104	MDL	0.418	PQL	mg/Kg	J	Q
VANADIUM	43.3		0.0230	MDL	0.104	PQL	mg/Kg	J	A

Sample ID: SL-165-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:30:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.128	J	0.0418	MDL	0.418	PQL	mg/Kg	J	Z

Sample ID: SL-165-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:30:00 *Analysis Type:* REA9 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	98.4		0.113	MDL	0.418	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory:** LL

EDD Filename: PrepDE166_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-170-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:00:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0588	U	0.0588	MDL	0.196	PQL	mg/Kg	UJ	Q
CADMIUM	0.0683	J	0.0392	MDL	0.0981	PQL	mg/Kg	J	Z
LEAD	3.56		0.0102	MDL	0.196	PQL	mg/Kg	J	Q, A

Sample ID: SL-170-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:00:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	3.48		0.0785	MDL	0.392	PQL	mg/Kg	J	Q
CHROMIUM	16.5		0.118	MDL	0.392	PQL	mg/Kg	J	Q, A
NICKEL	11.5		0.0981	MDL	0.392	PQL	mg/Kg	J	Q
VANADIUM	31.2		0.0216	MDL	0.0981	PQL	mg/Kg	J	A

Sample ID: SL-170-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:00:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0474	J	0.0392	MDL	0.392	PQL	mg/Kg	J	Z

Sample ID: SL-170-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:00:00 *Analysis Type:* REA9 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	67.2		0.106	MDL	0.392	PQL	mg/Kg	J	A

Sample ID: SL-171-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 9:35:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0646	J	0.0626	MDL	0.209	PQL	mg/Kg	J	Z, Q
LEAD	12.2		0.0108	MDL	0.209	PQL	mg/Kg	J	Q, A

Sample ID: SL-171-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 9:35:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	13.4		0.0834	MDL	0.417	PQL	mg/Kg	J	Q
CHROMIUM	16.3		0.125	MDL	0.417	PQL	mg/Kg	J	Q, A
NICKEL	13.3		0.104	MDL	0.417	PQL	mg/Kg	J	Q
VANADIUM	33.8		0.0229	MDL	0.104	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory:** LL

EDD Filename: PrepDE166_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-171-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 9:35:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0725	J	0.0417	MDL	0.417	PQL	mg/Kg	J	Z

Sample ID: SL-171-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 9:35:00 *Analysis Type:* REA9 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	106		0.113	MDL	0.417	PQL	mg/Kg	J	A

Sample ID: SL-172-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 9:25:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0818	J	0.0616	MDL	0.205	PQL	mg/Kg	J	Z, Q
LEAD	6.87		0.0107	MDL	0.205	PQL	mg/Kg	J	Q, A
SILVER	0.0272	J	0.0123	MDL	0.103	PQL	mg/Kg	J	Z

Sample ID: SL-172-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 9:25:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	3.81		0.0822	MDL	0.411	PQL	mg/Kg	J	Q
CHROMIUM	18.7		0.123	MDL	0.411	PQL	mg/Kg	J	Q, A
NICKEL	12.6		0.103	MDL	0.411	PQL	mg/Kg	J	Q
VANADIUM	38.3		0.0226	MDL	0.103	PQL	mg/Kg	J	A

Sample ID: SL-172-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 9:25:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.256	J	0.0411	MDL	0.411	PQL	mg/Kg	J	Z

Sample ID: SL-172-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 9:25:00 *Analysis Type:* REA9 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	107		0.111	MDL	0.411	PQL	mg/Kg	J	A

Sample ID: SL-173-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:20:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0902	J	0.0607	MDL	0.202	PQL	mg/Kg	J	Z, Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 Laboratory: LL

EDD Filename: PrepDE166_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-173-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:20:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	14.4		0.0105	MDL	0.202	PQL	mg/Kg	J	Q, A
SILVER	0.0392	J	0.0121	MDL	0.101	PQL	mg/Kg	J	Z

Sample ID: SL-173-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:20:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	5.09		0.0809	MDL	0.404	PQL	mg/Kg	J	Q
CHROMIUM	16.1		0.121	MDL	0.404	PQL	mg/Kg	J	Q, A
NICKEL	12.8		0.101	MDL	0.404	PQL	mg/Kg	J	Q
VANADIUM	29.3		0.0222	MDL	0.101	PQL	mg/Kg	J	A

Sample ID: SL-173-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:20:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.228	J	0.0404	MDL	0.404	PQL	mg/Kg	J	Z

Sample ID: SL-173-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:20:00 *Analysis Type:* REA9 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	82.3		0.109	MDL	0.404	PQL	mg/Kg	J	A

Sample ID: SL-174-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:53:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.111	J	0.0618	MDL	0.206	PQL	mg/Kg	J	Z, Q
LEAD	11.9		0.0107	MDL	0.206	PQL	mg/Kg	J	Q, A
SILVER	0.0761	J	0.0124	MDL	0.103	PQL	mg/Kg	J	Z

Sample ID: SL-174-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:53:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	6.11		0.0824	MDL	0.412	PQL	mg/Kg	J	Q
CHROMIUM	21.8		0.124	MDL	0.412	PQL	mg/Kg	J	Q, A
NICKEL	26.3		0.103	MDL	0.412	PQL	mg/Kg	J	Q
VANADIUM	43.8		0.0227	MDL	0.103	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory:** LL

EDD Filename: PrepDE166_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-174-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:53:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.180	J	0.0412	MDL	0.412	PQL	mg/Kg	J	Z

Sample ID: SL-174-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:53:00 *Analysis Type:* REA9 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	162		0.111	MDL	0.412	PQL	mg/Kg	J	A

Sample ID: SL-175-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 11:15:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0802	J	0.0619	MDL	0.206	PQL	mg/Kg	J	Z, Q
LEAD	6.55		0.0107	MDL	0.206	PQL	mg/Kg	J	Q, A
SILVER	0.0421	J	0.0124	MDL	0.103	PQL	mg/Kg	J	Z

Sample ID: SL-175-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 11:15:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	3.89		0.0825	MDL	0.413	PQL	mg/Kg	J	Q
CHROMIUM	16.6		0.124	MDL	0.413	PQL	mg/Kg	J	Q, A
NICKEL	11.7		0.103	MDL	0.413	PQL	mg/Kg	J	Q
VANADIUM	33.9		0.0227	MDL	0.103	PQL	mg/Kg	J	A

Sample ID: SL-175-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 11:15:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.129	J	0.0413	MDL	0.413	PQL	mg/Kg	J	Z

Sample ID: SL-175-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 11:15:00 *Analysis Type:* REA9 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	101		0.111	MDL	0.413	PQL	mg/Kg	J	A

Sample ID: SL-176-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 11:35:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0871	J	0.0601	MDL	0.200	PQL	mg/Kg	J	Z, Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory:** LL

EDD Filename: PrepDE166_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-176-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 11:35:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	7.30		0.0104	MDL	0.200	PQL	mg/Kg	J	Q, A

Sample ID: SL-176-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 11:35:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	7.23		0.0801	MDL	0.401	PQL	mg/Kg	J	Q
CHROMIUM	15.0		0.120	MDL	0.401	PQL	mg/Kg	J	Q, A
NICKEL	11.2		0.100	MDL	0.401	PQL	mg/Kg	J	Q
VANADIUM	27.5		0.0220	MDL	0.100	PQL	mg/Kg	J	A

Sample ID: SL-176-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 11:35:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.178	J	0.0401	MDL	0.401	PQL	mg/Kg	J	Z

Sample ID: SL-176-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 11:35:00 *Analysis Type:* REA9 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	80.0		0.108	MDL	0.401	PQL	mg/Kg	J	A

Sample ID: SL-179-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 8:50:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.102	J	0.0623	MDL	0.208	PQL	mg/Kg	J	Z, Q
LEAD	5.56		0.0108	MDL	0.208	PQL	mg/Kg	J	Q, A
SILVER	0.0498	J	0.0125	MDL	0.104	PQL	mg/Kg	J	Z

Sample ID: SL-179-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 8:50:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	8.07		0.0830	MDL	0.415	PQL	mg/Kg	J	Q
CHROMIUM	14.4		0.125	MDL	0.415	PQL	mg/Kg	J	Q, A
NICKEL	9.48		0.104	MDL	0.415	PQL	mg/Kg	J	Q
VANADIUM	25.6		0.0228	MDL	0.104	PQL	mg/Kg	J	A

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE166 Laboratory: LL

EDD Filename: PrepDE166_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-179-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 8:50:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.120	J	0.0415	MDL	0.415	PQL	mg/Kg	J	Z

Sample ID: SL-179-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 8:50:00 *Analysis Type:* REA9 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	72.6		0.112	MDL	0.415	PQL	mg/Kg	J	A

Sample ID: SL-180-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 1:45:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0627	U	0.0627	MDL	0.209	PQL	mg/Kg	UJ	Q
LEAD	4.48		0.0109	MDL	0.209	PQL	mg/Kg	J	Q, A
SILVER	0.0495	J	0.0125	MDL	0.104	PQL	mg/Kg	J	Z

Sample ID: SL-180-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 1:45:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	3.30		0.0836	MDL	0.418	PQL	mg/Kg	J	Q
CHROMIUM	13.0		0.125	MDL	0.418	PQL	mg/Kg	J	Q, A
NICKEL	9.17		0.104	MDL	0.418	PQL	mg/Kg	J	Q
VANADIUM	27.9		0.0230	MDL	0.104	PQL	mg/Kg	J	A

Sample ID: SL-180-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 1:45:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.0911	J	0.0418	MDL	0.418	PQL	mg/Kg	J	Z

Sample ID: SL-180-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 1:45:00 *Analysis Type:* REA9 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	74.2		0.113	MDL	0.418	PQL	mg/Kg	J	A

Sample ID: SL-181-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:00:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0858	J	0.0621	MDL	0.207	PQL	mg/Kg	J	Z, Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 Laboratory: LL

EDD Filename: PrepDE166_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-181-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:00:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	8.04		0.0108	MDL	0.207	PQL	mg/Kg	J	Q, A
SILVER	0.0466	J	0.0124	MDL	0.104	PQL	mg/Kg	J	Z

Sample ID: SL-181-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:00:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	3.45		0.0828	MDL	0.414	PQL	mg/Kg	J	Q
CHROMIUM	14.3		0.124	MDL	0.414	PQL	mg/Kg	J	Q, A
NICKEL	10.1		0.104	MDL	0.414	PQL	mg/Kg	J	Q
VANADIUM	31.2		0.0228	MDL	0.104	PQL	mg/Kg	J	A

Sample ID: SL-181-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:00:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.126	J	0.0414	MDL	0.414	PQL	mg/Kg	J	Z

Sample ID: SL-181-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:00:00 *Analysis Type:* REA9 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	113		0.112	MDL	0.414	PQL	mg/Kg	J	A

Sample ID: SL-182-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:25:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.136	J	0.0624	MDL	0.208	PQL	mg/Kg	J	Z, Q
LEAD	9.67		0.0108	MDL	0.208	PQL	mg/Kg	J	Q, A
SILVER	0.0367	J	0.0125	MDL	0.104	PQL	mg/Kg	J	Z

Sample ID: SL-182-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:25:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	4.52		0.0833	MDL	0.416	PQL	mg/Kg	J	Q
CHROMIUM	38.1		0.125	MDL	0.416	PQL	mg/Kg	J	Q, A
NICKEL	27.7		0.104	MDL	0.416	PQL	mg/Kg	J	Q
VANADIUM	41.5		0.0229	MDL	0.104	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 Laboratory: LL

EDD Filename: PrepDE166_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-182-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:25:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.112	J	0.0416	MDL	0.416	PQL	mg/Kg	J	Z

Sample ID: SL-182-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:25:00 *Analysis Type:* REA9 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	109		0.112	MDL	0.416	PQL	mg/Kg	J	A

Sample ID: SL-183-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:45:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0609	U	0.0609	MDL	0.203	PQL	mg/Kg	UJ	Q
LEAD	4.85		0.0106	MDL	0.203	PQL	mg/Kg	J	Q, A

Sample ID: SL-183-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:45:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	5.67		0.0812	MDL	0.406	PQL	mg/Kg	J	Q
CHROMIUM	13.0		0.122	MDL	0.406	PQL	mg/Kg	J	Q, A
NICKEL	8.89		0.102	MDL	0.406	PQL	mg/Kg	J	Q
VANADIUM	24.3		0.0223	MDL	0.102	PQL	mg/Kg	J	A

Sample ID: SL-183-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:45:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.142	J	0.0406	MDL	0.406	PQL	mg/Kg	J	Z

Sample ID: SL-183-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:45:00 *Analysis Type:* REA9 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	71.2		0.110	MDL	0.406	PQL	mg/Kg	J	A

Sample ID: SL-184-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:05:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.133	J	0.0624	MDL	0.208	PQL	mg/Kg	J	Z, Q
LEAD	9.63		0.0108	MDL	0.208	PQL	mg/Kg	J	Q, A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory:** LL

EDD Filename: PrepDE166_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-184-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:05:00 *Analysis Type:* REA5 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0547	J	0.0125	MDL	0.104	PQL	mg/Kg	J	Z

Sample ID: SL-184-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:05:00 *Analysis Type:* REA6 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	4.27		0.0833	MDL	0.416	PQL	mg/Kg	J	Q
CHROMIUM	19.1		0.125	MDL	0.416	PQL	mg/Kg	J	Q, A
NICKEL	13.9		0.104	MDL	0.416	PQL	mg/Kg	J	Q
VANADIUM	44.1		0.0229	MDL	0.104	PQL	mg/Kg	J	A

Sample ID: SL-184-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:05:00 *Analysis Type:* REA7 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.252	J	0.0416	MDL	0.416	PQL	mg/Kg	J	Z

Sample ID: SL-184-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:05:00 *Analysis Type:* REA9 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	122		0.112	MDL	0.416	PQL	mg/Kg	J	A

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: DUP09-SA8N-QC-052611 *Collected:* 5/26/2011 2:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.38	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-002-SA8N-SB-4.0-5.0 *Collected:* 5/26/2011 2:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.49	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory:** LL

EDD Filename: PrepDE166_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: SL-008-SA8N-SB-4.0-5.0 *Collected:* 5/26/2011 9:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.55	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-165-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.85	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-171-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 9:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.52	J	0.21	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-173-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.83	J	0.21	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-174-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:53:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.34	J	0.21	MDL	1.0	PQL	mg/Kg	J	Z

Sample ID: SL-175-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 11:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.50	J	0.21	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-176-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 11:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.31	J	0.21	MDL	1.0	PQL	mg/Kg	J	Z

Sample ID: SL-179-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 8:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.43	J	0.21	MDL	1.0	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: PrepDE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: SL-180-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 1:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.39	J	0.21	MDL	1.0	PQL	mg/Kg	J	Z

Sample ID: SL-181-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.29	J	0.21	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-182-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.48	J	0.21	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-184-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.30	J	0.21	MDL	1.1	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7470A **Matrix: AQ**

Sample ID: EB09-SA5DN-SS-052611 *Collected:* 5/26/2011 12:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.000046	U	0.000046	MDL	0.00020	PQL	mg/L	UJ	L

Sample ID: EB11-SA8N-SB-052611 *Collected:* 5/26/2011 1:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.000046	U	0.000046	MDL	0.00020	PQL	mg/L	UJ	L

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: PrepDE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: SL-008-SA8N-SB-9.0-10.0 *Collected:* 5/26/2011 9:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0059	J	0.0032	MDL	0.113	PQL	mg/Kg	J	Z

Sample ID: SL-164-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0128	J	0.0031	MDL	0.107	PQL	mg/Kg	J	Z

Sample ID: SL-165-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0070	J	0.0029	MDL	0.103	PQL	mg/Kg	J	Z

Sample ID: SL-170-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0068	J	0.0028	MDL	0.0972	PQL	mg/Kg	J	Z

Sample ID: SL-171-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 9:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0150	J	0.0030	MDL	0.105	PQL	mg/Kg	J	Z

Sample ID: SL-172-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 9:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0172	J	0.0030	MDL	0.104	PQL	mg/Kg	J	Z

Sample ID: SL-173-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0207	J	0.0029	MDL	0.101	PQL	mg/Kg	J	Z

Sample ID: SL-174-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:53:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0143	J	0.0029	MDL	0.0999	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory:** LL

EDD Filename: PrepDE166_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7471A **Matrix:** SO

Sample ID: SL-175-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 11:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0151	J	0.0029	MDL	0.103	PQL	mg/Kg	J	Z

Sample ID: SL-176-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 11:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0050	J	0.0028	MDL	0.0968	PQL	mg/Kg	J	Z

Sample ID: SL-179-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 8:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0083	J	0.0030	MDL	0.104	PQL	mg/Kg	J	Z

Sample ID: SL-184-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0344	J	0.0029	MDL	0.0997	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 1625C **Matrix:** AQ

Sample ID: EB09-SA5DN-SS-052611 *Collected:* 5/26/2011 12:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	1.68		0.495	MDL	0.990	PQL	ng/L	U	B

Method Category: SVOA

Method: 8015M **Matrix:** AQ

Sample ID: EB09-SA5DN-SS-052611 *Collected:* 5/26/2011 12:45:00 *Analysis Type:* REA3 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C12-C14)	0.22	U	0.22	MDL	1.3	PQL	mg/L	UJ	H
EFH (C15-C20)	0.22	U	0.22	MDL	1.3	PQL	mg/L	UJ	H
EFH (C21-C30)	0.22	U	0.22	MDL	1.3	PQL	mg/L	UJ	H
EFH (C30-C40)	0.22	U	0.22	MDL	1.3	PQL	mg/L	UJ	H

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE166 Laboratory: LL

EDD Filename: PrepDE166_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA **Method:** 8015M **Matrix:** AQ

Sample ID: EB09-SA5DN-SS-052611 *Collected:* 5/26/2011 12:45:00 *Analysis Type:* REA3 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C8-C11)	0.40	J	0.22	MDL	1.3	PQL	mg/L	UJ	B, H

Method Category: SVOA **Method:** 8015M **Matrix:** SO

Sample ID: SL-002-SA8N-SB-4.0-5.0 *Collected:* 5/26/2011 2:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIETHYLENE GLYCOL	6.0	U	6.0	MDL	12	PQL	mg/Kg	UJ	Q

Sample ID: SL-175-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 11:15:00 *Analysis Type:* REA3 *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	6.0	J	4.3	MDL	13	PQL	mg/Kg	J	Z

Sample ID: SL-179-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 8:50:00 *Analysis Type:* REA3 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	3.5		0.42	MDL	1.3	PQL	mg/Kg	J	L
EFH (C30-C40)	36		0.42	MDL	1.3	PQL	mg/Kg	J	L

Method Category: SVOA **Method:** 8081A **Matrix:** AQ

Sample ID: EB09-SA5DN-SS-052611 *Collected:* 5/26/2011 12:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEPTACHLOR	0.0088	J	0.0026	MDL	0.010	PQL	ug/L	J	Z, L

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory:** LL

EDD Filename: PrepDE166_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8081A **Matrix:** SO

Sample ID: SL-164-SA5DN-SS-0.0-0.5 ***Collected:*** 5/26/2011 3:55:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDD	0.073	U	0.073	MDL	0.37	PQL	ug/Kg	UJ	S
4,4'-DDE	0.56	U	0.56	MDL	0.56	PQL	ug/Kg	UJ	S
4,4'-DDT	0.82	U	0.82	MDL	0.82	PQL	ug/Kg	UJ	S
ALDRIN	0.073	U	0.073	MDL	0.18	PQL	ug/Kg	UJ	S
ALPHA-BHC	0.037	U	0.037	MDL	0.18	PQL	ug/Kg	UJ	S
BETA-BHC	0.12	J	0.066	MDL	0.18	PQL	ug/Kg	J	Z, Q, Q, S
Chlordane	2.5	J	0.88	MDL	3.7	PQL	ug/Kg	J	Z, S
DELTA-BHC	0.040	U	0.040	MDL	0.18	PQL	ug/Kg	UJ	S
DIELDRIN	0.073	U	0.073	MDL	0.37	PQL	ug/Kg	UJ	S
ENDOSULFAN I	0.048	U	0.048	MDL	0.18	PQL	ug/Kg	UJ	S
ENDOSULFAN II	0.10	J	0.073	MDL	0.37	PQL	ug/Kg	J	Z, S
ENDOSULFAN SULFATE	0.073	U	0.073	MDL	0.37	PQL	ug/Kg	UJ	S
ENDRIN	0.073	U	0.073	MDL	0.37	PQL	ug/Kg	UJ	S
ENDRIN ALDEHYDE	0.16	U	0.16	MDL	0.37	PQL	ug/Kg	UJ	S
ENDRIN KETONE	0.073	U	0.073	MDL	0.37	PQL	ug/Kg	UJ	S
gamma-BHC (Lindane)	0.037	U	0.037	MDL	0.18	PQL	ug/Kg	UJ	S
HEPTACHLOR	0.066	U	0.066	MDL	0.18	PQL	ug/Kg	UJ	S
HEPTACHLOR EPOXIDE	0.037	U	0.037	MDL	0.18	PQL	ug/Kg	UJ	S
METHOXYCHLOR	0.37	U	0.37	MDL	1.8	PQL	ug/Kg	UJ	S
MIREX	0.089	U	0.089	MDL	0.37	PQL	ug/Kg	UJ	S
TOXAPHENE	2.4	U	2.4	MDL	7.3	PQL	ug/Kg	UJ	S

Sample ID: SL-165-SA5DN-SS-0.0-0.5 ***Collected:*** 5/26/2011 3:30:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	1.5		0.071	MDL	0.37	PQL	ug/Kg	J	L
Chlordane	2.1	J	0.86	MDL	3.7	PQL	ug/Kg	J	Z
HEPTACHLOR EPOXIDE	0.053	J	0.037	MDL	0.18	PQL	ug/Kg	J	Z

Sample ID: SL-171-SA5DN-SS-0.0-0.5 ***Collected:*** 5/26/2011 9:35:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BETA-BHC	0.27		0.064	MDL	0.18	PQL	ug/Kg	J	S
Chlordane	1.2	J	0.85	MDL	3.6	PQL	ug/Kg	J	Z, S
gamma-BHC (Lindane)	0.041	J	0.036	MDL	0.18	PQL	ug/Kg	J	Z, S

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory:** LL

EDD Filename: PrepDE166_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8081A **Matrix:** SO

Sample ID: SL-172-SA5DN-SS-0.0-0.5 ***Collected:*** 5/26/2011 9:25:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDD	0.071	U	0.071	MDL	0.37	PQL	ug/Kg	UJ	S
4,4'-DDE	0.18	U	0.18	MDL	0.37	PQL	ug/Kg	UJ	S
4,4'-DDT	0.50	U	0.50	MDL	0.50	PQL	ug/Kg	UJ	S
ALDRIN	0.071	U	0.071	MDL	0.18	PQL	ug/Kg	UJ	S
ALPHA-BHC	0.037	U	0.037	MDL	0.18	PQL	ug/Kg	UJ	S
BETA-BHC	0.065	U	0.065	MDL	0.18	PQL	ug/Kg	UJ	S
Chlordane	5.1		0.86	MDL	3.7	PQL	ug/Kg	J	S, S
DELTA-BHC	0.039	U	0.039	MDL	0.18	PQL	ug/Kg	UJ	S
DIELDRIN	0.30	U	0.30	MDL	0.37	PQL	ug/Kg	UJ	S
ENDOSULFAN I	0.12	U	0.12	MDL	0.18	PQL	ug/Kg	UJ	S
ENDOSULFAN II	0.071	U	0.071	MDL	0.37	PQL	ug/Kg	UJ	S
ENDOSULFAN SULFATE	0.071	U	0.071	MDL	0.37	PQL	ug/Kg	UJ	S
ENDRIN	0.071	U	0.071	MDL	0.37	PQL	ug/Kg	UJ	S
ENDRIN ALDEHYDE	0.071	U	0.071	MDL	0.37	PQL	ug/Kg	UJ	S
ENDRIN KETONE	0.27	U	0.27	MDL	0.37	PQL	ug/Kg	UJ	S
gamma-BHC (Lindane)	0.037	U	0.037	MDL	0.18	PQL	ug/Kg	UJ	S
HEPTACHLOR	0.065	U	0.065	MDL	0.18	PQL	ug/Kg	UJ	S
HEPTACHLOR EPOXIDE	0.037	U	0.037	MDL	0.18	PQL	ug/Kg	UJ	S
METHOXYCHLOR	0.37	U	0.37	MDL	1.8	PQL	ug/Kg	UJ	S
MIREX	0.071	U	0.071	MDL	0.37	PQL	ug/Kg	UJ	S
TOXAPHENE	2.4	U	2.4	MDL	7.1	PQL	ug/Kg	UJ	S

Sample ID: SL-173-SA5DN-SS-0.0-0.5 ***Collected:*** 5/26/2011 10:20:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	1.9		0.069	MDL	0.36	PQL	ug/Kg	J	L, S
Chlordane	2.3	J	0.84	MDL	3.6	PQL	ug/Kg	J	Z, S
DELTA-BHC	0.067	J	0.038	MDL	0.17	PQL	ug/Kg	J	Z, S

Sample ID: SL-176-SA5DN-SS-0.0-0.5 ***Collected:*** 5/26/2011 11:35:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	1.7		0.069	MDL	0.35	PQL	ug/Kg	J	L

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: PrepDE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8081A **Matrix: SO**

Sample ID: SL-179-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 8:50:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	0.88		0.069	MDL	0.36	PQL	ug/Kg	J	L

Sample ID: SL-180-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 1:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALDRIN	0.11	J	0.069	MDL	0.17	PQL	ug/Kg	J	Z, S

Sample ID: SL-181-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	2.4		0.070	MDL	0.36	PQL	ug/Kg	J	L, S

Sample ID: SL-183-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MIREX	2.2		0.068	MDL	0.35	PQL	ug/Kg	J	S

Sample ID: SL-184-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.23	J	0.070	MDL	0.36	PQL	ug/Kg	J	Z
4,4'-DDT	0.41		0.070	MDL	0.36	PQL	ug/Kg	J	L
Chlordane	1.6	J	0.85	MDL	3.6	PQL	ug/Kg	J	Z
ENDRIN KETONE	0.11	J	0.070	MDL	0.36	PQL	ug/Kg	J	Z
HEPTACHLOR EPOXIDE	0.051	J	0.036	MDL	0.18	PQL	ug/Kg	J	Z
MIREX	0.25	J	0.070	MDL	0.36	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: SL-164-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	1.4	J	0.43	MDL	1.9	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory:** LL

EDD Filename: PrepDE166_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8082 **Matrix:** SO

Sample ID: SL-165-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	0.45	J	0.42	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-170-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	1.7	J	0.40	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-172-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 9:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	1.1	J	0.42	MDL	1.8	PQL	ug/Kg	J	Z
Aroclor 5460	2.8	J	1.1	MDL	3.6	PQL	ug/Kg	J	Z

Sample ID: SL-173-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1016	0.35	U	0.35	MDL	1.8	PQL	ug/Kg	UJ	S
AROCLOR 1221	0.35	U	0.35	MDL	1.8	PQL	ug/Kg	UJ	S
AROCLOR 1232	0.35	U	0.35	MDL	1.8	PQL	ug/Kg	UJ	S
AROCLOR 1242	0.35	U	0.35	MDL	1.8	PQL	ug/Kg	UJ	S
AROCLOR 1248	0.35	U	0.35	MDL	1.8	PQL	ug/Kg	UJ	S
AROCLOR 1254	0.35	U	0.35	MDL	1.8	PQL	ug/Kg	UJ	S
AROCLOR 1260	2.0		0.41	MDL	1.8	PQL	ug/Kg	J	S
Aroclor 1262	0.35	U	0.35	MDL	1.8	PQL	ug/Kg	UJ	S
Aroclor 1268	0.35	U	0.35	MDL	1.8	PQL	ug/Kg	UJ	S
Aroclor 5432	1.1	U	1.1	MDL	3.5	PQL	ug/Kg	UJ	S
Aroclor 5442	1.1	U	1.1	MDL	3.5	PQL	ug/Kg	UJ	S
Aroclor 5460	2.0	J	1.1	MDL	3.5	PQL	ug/Kg	J	Z, S

Sample ID: SL-174-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:53:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	1.1	J	0.41	MDL	1.8	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory:** LL

EDD Filename: PrepDE166_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8082 **Matrix:** SO

Sample ID: SL-175-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 11:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	1.2	J	0.42	MDL	1.8	PQL	ug/Kg	J	Z
Aroclor 5460	1.9	J	1.1	MDL	3.5	PQL	ug/Kg	J	Z

Sample ID: SL-179-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 8:50:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	1.2	J	0.41	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-180-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 1:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	0.86	J	0.34	MDL	1.8	PQL	ug/Kg	J	Z
AROCLOR 1260	0.52	J	0.41	MDL	1.8	PQL	ug/Kg	J	Z
Aroclor 5460	1.5	J	1.0	MDL	3.4	PQL	ug/Kg	J	Z

Sample ID: SL-182-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	0.74	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z
AROCLOR 1260	0.83	J	0.41	MDL	1.8	PQL	ug/Kg	J	Z
Aroclor 5460	2.7	J	1.1	MDL	3.5	PQL	ug/Kg	J	Z

Sample ID: SL-184-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	3.2	J	1.1	MDL	3.5	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8151A **Matrix:** SO

Sample ID: SL-164-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MCPA	230	J	83	MDL	270	PQL	ug/Kg	J	Z, Q, Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: PrepDE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8151A **Matrix: SO**

Sample ID: SL-170-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MCPA	160	J	78	MDL	260	PQL	ug/Kg	J	Z

Sample ID: SL-172-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 9:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MCPA	220	J	82	MDL	270	PQL	ug/Kg	J	Z

Sample ID: SL-180-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 1:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MCPA	210	J	79	MDL	260	PQL	ug/Kg	J	Z

Sample ID: SL-181-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DB	1.2	J	0.65	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-182-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MCPP	160	J	79	MDL	260	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8270C **Matrix: AQ**

Sample ID: EB09-SA5DN-SS-052611 *Collected:* 5/26/2011 12:45:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	6	U	6	MDL	15	PQL	ug/L	UJ	E

Sample ID: EB11-SA8N-SB-052611 *Collected:* 5/26/2011 1:00:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZOIC ACID	6	U	6	MDL	15	PQL	ug/L	UJ	E

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory:** LL

EDD Filename: PrepDE166_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-164-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	24	J	18	MDL	370	PQL	ug/Kg	J	Z

Sample ID: SL-170-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	18	J	17	MDL	340	PQL	ug/Kg	J	Z

Sample ID: SL-171-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 9:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	35	J	18	MDL	180	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	31	J	18	MDL	180	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	39	J	18	MDL	180	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	23	J	18	MDL	180	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	24	J	18	MDL	180	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	31	J	18	MDL	350	PQL	ug/Kg	J	Z
CHRYSENE	40	J	18	MDL	180	PQL	ug/Kg	J	Z
FLUORANTHENE	43	J	18	MDL	180	PQL	ug/Kg	J	Z
PYRENE	44	J	18	MDL	180	PQL	ug/Kg	J	Z

Sample ID: SL-172-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 9:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	28	J	18	MDL	360	PQL	ug/Kg	J	Z

Sample ID: SL-173-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	31	J	18	MDL	180	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	23	J	18	MDL	180	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	34	J	18	MDL	180	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	21	J	18	MDL	180	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	26	J	18	MDL	350	PQL	ug/Kg	J	Z
CHRYSENE	35	J	18	MDL	180	PQL	ug/Kg	J	Z
FLUORANTHENE	69	J	18	MDL	180	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 Laboratory: LL

EDD Filename: PrepDE166_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-173-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHENANTHRENE	45	J	18	MDL	180	PQL	ug/Kg	J	Z
PYRENE	55	J	18	MDL	180	PQL	ug/Kg	J	Z

Sample ID: SL-174-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 10:53:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	20	J	17	MDL	350	PQL	ug/Kg	J	Z

Sample ID: SL-175-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 11:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	34	J	18	MDL	360	PQL	ug/Kg	J	Z

Sample ID: SL-176-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 11:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	22	J	17	MDL	350	PQL	ug/Kg	J	Z

Sample ID: SL-179-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 8:50:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	62	J	17	MDL	170	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	160	J	17	MDL	170	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	100	J	17	MDL	170	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	100	J	17	MDL	170	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	29	J	17	MDL	350	PQL	ug/Kg	J	Z
CARBAZOLE	27	J	17	MDL	170	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	32	J	17	MDL	170	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	94	J	17	MDL	170	PQL	ug/Kg	J	Z

Sample ID: SL-180-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 1:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	26	J	17	MDL	170	PQL	ug/Kg	J	Z
2-METHYLNAPHTHALENE	31	J	17	MDL	170	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory:** LL

EDD Filename: PrepDE166_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-180-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 1:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	28	J	17	MDL	350	PQL	ug/Kg	J	Z
DIBENZOFURAN	150	J	17	MDL	170	PQL	ug/Kg	J	Z
NAPHTHALENE	37	J	17	MDL	170	PQL	ug/Kg	J	Z

Sample ID: SL-181-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	22	J	18	MDL	350	PQL	ug/Kg	J	Z

Sample ID: SL-182-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	25	J	18	MDL	350	PQL	ug/Kg	J	Z

Sample ID: SL-183-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	38	J	17	MDL	340	PQL	ug/Kg	J	Z

Sample ID: SL-184-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	24	J	18	MDL	350	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8270C SIM **Matrix:** AQ

Sample ID: EB09-SA5DN-SS-052611 *Collected:* 5/26/2011 12:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.032	J	0.0098	MDL	0.049	PQL	ug/L	J	Z
2-METHYLNAPHTHALENE	0.032	J	0.0098	MDL	0.049	PQL	ug/L	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	0.059	J	0.049	MDL	0.98	PQL	ug/L	U	B
Di-n-butylphthalate	0.065	J	0.049	MDL	0.98	PQL	ug/L	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 Laboratory: LL

EDD Filename: PrepDE166_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 8270C SIM **Matrix:** AQ

Sample ID: EB11-SA8N-SB-052611 *Collected:* 5/26/2011 1:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.033	J	0.0097	MDL	0.048	PQL	ug/L	J	Z
2-METHYLNAPHTHALENE	0.034	J	0.0097	MDL	0.048	PQL	ug/L	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	0.058	J	0.048	MDL	0.97	PQL	ug/L	U	B
Di-n-butylphthalate	0.065	J	0.048	MDL	0.97	PQL	ug/L	J	Z

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: DUP09-SA8N-QC-052611 *Collected:* 5/26/2011 2:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	12	J	7.1	MDL	21	PQL	ug/Kg	J	Z, FD

Sample ID: SL-002-SA8N-SB-4.0-5.0 *Collected:* 5/26/2011 2:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	7.2	U	7.2	MDL	22	PQL	ug/Kg	UJ	FD

Sample ID: SL-008-SA8N-SB-4.0-5.0 *Collected:* 5/26/2011 9:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	9.8	J	7.1	MDL	21	PQL	ug/Kg	J	Z
CHRYSENE	0.47	J	0.40	MDL	2.0	PQL	ug/Kg	J	Z

Sample ID: SL-008-SA8N-SB-9.0-10.0 *Collected:* 5/26/2011 9:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	1.1	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	1.1	J	0.77	MDL	1.9	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	11	J	6.9	MDL	21	PQL	ug/Kg	J	Z

Sample ID: SL-164-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	0.77	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: PrepDE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: **SL-164-SA5DN-SS-0.0-0.5** *Collected:* **5/26/2011 3:55:00** *Analysis Type:* **RES-BASE/NEUTRAL** *Dilution:* **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	0.83	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.6	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	1.1	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
Butylbenzylphthalate	6.9	J	6.6	MDL	20	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.1	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z
PHENANTHRENE	1.2	J	0.73	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: **SL-165-SA5DN-SS-0.0-0.5** *Collected:* **5/26/2011 3:30:00** *Analysis Type:* **RES-BASE/NEUTRAL** *Dilution:* **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	2.5	J	1.8	MDL	9.0	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	64	J	32	MDL	97	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	5.8	J	3.6	MDL	9.0	PQL	ug/Kg	J	Z

Sample ID: **SL-172-SA5DN-SS-0.0-0.5** *Collected:* **5/26/2011 9:25:00** *Analysis Type:* **RES-BASE/NEUTRAL** *Dilution:* **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	3.7	J	3.6	MDL	9.0	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	4.9	J	3.6	MDL	9.0	PQL	ug/Kg	J	Z
CHRYSENE	4.7	J	1.8	MDL	9.0	PQL	ug/Kg	J	Z
FLUORANTHENE	4.9	J	3.6	MDL	9.0	PQL	ug/Kg	J	Z
PYRENE	7.1	J	3.6	MDL	9.0	PQL	ug/Kg	J	Z

Sample ID: **SL-173-SA5DN-SS-0.0-0.5** *Collected:* **5/26/2011 10:20:00** *Analysis Type:* **RES-BASE/NEUTRAL** *Dilution:* **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	2.9	J	1.8	MDL	8.8	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	7.4	J	3.5	MDL	8.8	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	4.3	J	3.5	MDL	8.8	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	7.9	J	3.5	MDL	8.8	PQL	ug/Kg	J	Z

Sample ID: **SL-174-SA5DN-SS-0.0-0.5** *Collected:* **5/26/2011 10:53:00** *Analysis Type:* **RES-BASE/NEUTRAL** *Dilution:* **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	1.8	J	1.7	MDL	8.7	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory:** LL

EDD Filename: PrepDE166_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: SL-175-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 11:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	0.79	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	0.83	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	0.88	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	0.79	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z
CHRYSENE	1.4	J	0.36	MDL	1.8	PQL	ug/Kg	J	Z
PHENANTHRENE	1.2	J	0.72	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-176-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 11:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	0.97	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	0.87	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.5	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z
CHRYSENE	1.4	J	0.35	MDL	1.7	PQL	ug/Kg	J	Z
PHENANTHRENE	1.5	J	0.69	MDL	1.7	PQL	ug/Kg	J	Z

Sample ID: SL-182-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	1.2	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	0.80	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
Butylbenzylphthalate	6.9	J	6.4	MDL	19	PQL	ug/Kg	J	Z
CHRYSENE	0.80	J	0.35	MDL	1.8	PQL	ug/Kg	J	Z
FLUORANTHENE	0.89	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z
PYRENE	0.96	J	0.71	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-183-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 2:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	0.87	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.5	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	0.81	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
CHRYSENE	1.0	J	0.34	MDL	1.7	PQL	ug/Kg	J	Z
PHENANTHRENE	0.82	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z
PYRENE	0.92	J	0.68	MDL	1.7	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE166 Laboratory: LL

EDD Filename: PrepDE166_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA
Method: 8270C SIM **Matrix:** SO

Sample ID: SL-184-SA5DN-SS-0.0-0.5 *Collected:* 5/26/2011 3:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	4.4	J	3.5	MDL	8.8	PQL	ug/Kg	J	Z
CHRYSENE	3.3	J	1.8	MDL	8.8	PQL	ug/Kg	J	Z
FLUORANTHENE	3.8	J	3.5	MDL	8.8	PQL	ug/Kg	J	Z
PYRENE	4.4	J	3.5	MDL	8.8	PQL	ug/Kg	J	Z

Method Category: SVOA
Method: 8330A **Matrix:** AQ

Sample ID: EB09-SA5DN-SS-052611 *Collected:* 5/26/2011 12:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
RDX	0.58	J	0.20	MDL	0.60	PQL	ug/L	J	Z

Method Category: VOA
Method: 8260B **Matrix:** AQ

Sample ID: EB11-SA8N-SB-052611 *Collected:* 5/26/2011 1:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZENE	1	J	0.5	MDL	5	PQL	ug/L	J	Z
TOLUENE	0.7	J	0.7	MDL	5	PQL	ug/L	J	Z

Method Category: VOA
Method: 8260B **Matrix:** SO

Sample ID: DUP09-SA8N-QC-052611 *Collected:* 5/26/2011 2:45:00 *Analysis Type:* RES *Dilution:* 0.96

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	9.8		7.6	MDL	9.0	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.6	J	0.27	MDL	4.5	PQL	ug/Kg	U	B
TOLUENE	0.09	U	0.09	MDL	4.5	PQL	ug/Kg	UJ	FD

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: PrepDE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: **VOA**

Method: **8260B** ***Matrix:*** **SO**

Sample ID: **SL-002-SA8N-SB-4.0-5.0** ***Collected:*** **5/26/2011 2:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1.04**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
ACETONE	9.7	J	8.3	MDL	9.9	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.9	J	0.30	MDL	5.0	PQL	ug/Kg	U	B
TOLUENE	0.11	J	0.1	MDL	5.0	PQL	ug/Kg	J	Z, FD

Sample ID: **SL-008-SA8N-SB-4.0-5.0** ***Collected:*** **5/26/2011 9:15:00** ***Analysis Type:*** **RES** ***Dilution:*** **0.96**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
ACETONE	9.9		7.7	MDL	9.2	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.6	J	0.27	MDL	4.6	PQL	ug/Kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: PrepDE166_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision
E	Laboratory Triplicate Precision
E	Matrix Spike Precision

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: PrepDE166_v1 **eQAPP Name: CDM_SSFL_110509**

F	Equipment Blank Contamination
F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Laboratory Triplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: PrepDE166_v1 **eQAPP Name: CDM_SSFL_110509**

Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation
R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE166

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: DE166 **Laboratory: LL**
EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015M **Preparation Method: 3510C**
Matrix: AQ

Sample ID	Type	Actual	Criteria	Units	Flag
EB09-SA5DN-SS-052611 (REA3)	Sampling To Analysis	9.00	7.00	DAYS	J (all detects) UJ (all non-detects)

Method: 9040B **Preparation Method: 3510C**
Matrix: AQ

Sample ID	Type	Actual	Criteria	Units	Flag
EB09-SA5DN-SS-052611 (RES)	Sampling To Analysis	150.00	48.00	HOURS	No Qualifiers Applied
EB11-SA8N-SB-052611 (RES)		150.00	48.00	HOURS	

Method Blank Outlier Report

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **1625C**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKWI15B261718	6/21/2011 5:18:00 PM	N-NITROSODIMETHYLAMINE	12.1 ng/L	EB09-SA5DN-SS-052611

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
EB09-SA5DN-SS-052611(RES)	N-NITROSODIMETHYLAMINE	1.68 ng/L	1.68U ng/L

Method: **6010B**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P14748CB222255	5/31/2011 10:55:00 PM	MAGNESIUM	0.0211 mg/L	EB09-SA5DN-SS-052611 EB11-SA8N-SB-052611

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P15208EB220140	6/3/2011 1:40:00 AM	ALUMINUM CALCIUM PHOSPHORUS STRONTIUM TIN	7.72 mg/Kg 21.3 mg/Kg 1.14 mg/Kg 0.118 mg/Kg 1.21 mg/Kg	DUP09-SA8N-QC-052611 SL-002-SA8N-SB-4.0-5.0 SL-002-SA8N-SB-9.0-10.0 SL-008-SA8N-SB-4.0-5.0 SL-008-SA8N-SB-9.0-10.0 SL-164-SA5DN-SS-0.0-0.5 SL-165-SA5DN-SS-0.0-0.5 SL-170-SA5DN-SS-0.0-0.5 SL-171-SA5DN-SS-0.0-0.5 SL-172-SA5DN-SS-0.0-0.5 SL-173-SA5DN-SS-0.0-0.5 SL-174-SA5DN-SS-0.0-0.5 SL-175-SA5DN-SS-0.0-0.5 SL-176-SA5DN-SS-0.0-0.5 SL-179-SA5DN-SS-0.0-0.5 SL-180-SA5DN-SS-0.0-0.5 SL-181-SA5DN-SS-0.0-0.5 SL-182-SA5DN-SS-0.0-0.5 SL-183-SA5DN-SS-0.0-0.5 SL-184-SA5DN-SS-0.0-0.5

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP09-SA8N-QC-052611(REA)	TIN	2.64 mg/Kg	2.64U mg/Kg
SL-002-SA8N-SB-4.0-5.0(REA)	TIN	2.72 mg/Kg	2.72U mg/Kg
SL-002-SA8N-SB-9.0-10.0(REA)	TIN	2.44 mg/Kg	2.44U mg/Kg
SL-008-SA8N-SB-4.0-5.0(REA)	TIN	2.53 mg/Kg	2.53U mg/Kg
SL-008-SA8N-SB-9.0-10.0(REA)	TIN	2.65 mg/Kg	2.65U mg/Kg

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Method Blank Outlier Report

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-164-SA5DN-SS-0.0-0.5(REA)	TIN	2.45 mg/Kg	2.45U mg/Kg
SL-165-SA5DN-SS-0.0-0.5(REA)	TIN	2.37 mg/Kg	2.37U mg/Kg
SL-170-SA5DN-SS-0.0-0.5(REA)	TIN	2.23 mg/Kg	2.23U mg/Kg
SL-171-SA5DN-SS-0.0-0.5(REA)	TIN	2.24 mg/Kg	2.24U mg/Kg
SL-172-SA5DN-SS-0.0-0.5(REA)	TIN	2.17 mg/Kg	2.17U mg/Kg
SL-173-SA5DN-SS-0.0-0.5(REA)	TIN	2.37 mg/Kg	2.37U mg/Kg
SL-174-SA5DN-SS-0.0-0.5(REA)	TIN	2.34 mg/Kg	2.34U mg/Kg
SL-175-SA5DN-SS-0.0-0.5(REA)	TIN	2.16 mg/Kg	2.16U mg/Kg
SL-176-SA5DN-SS-0.0-0.5(REA)	TIN	4.84 mg/Kg	4.84U mg/Kg
SL-179-SA5DN-SS-0.0-0.5(REA)	TIN	2.39 mg/Kg	2.39U mg/Kg
SL-180-SA5DN-SS-0.0-0.5(REA)	TIN	2.40 mg/Kg	2.40U mg/Kg
SL-181-SA5DN-SS-0.0-0.5(REA)	TIN	2.27 mg/Kg	2.27U mg/Kg
SL-182-SA5DN-SS-0.0-0.5(REA)	TIN	2.15 mg/Kg	2.15U mg/Kg
SL-183-SA5DN-SS-0.0-0.5(REA)	TIN	2.44 mg/Kg	2.44U mg/Kg
SL-184-SA5DN-SS-0.0-0.5(REA)	TIN	2.19 mg/Kg	2.19U mg/Kg

Method: **6020**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P14750CB220953A	6/1/2011 9:53:00 AM	LEAD	0.000055 mg/L	EB09-SA5DN-SS-052611 EB11-SA8N-SB-052611

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
EB09-SA5DN-SS-052611(RES)	LEAD	0.000071 mg/L	0.000071U mg/L
EB11-SA8N-SB-052611(RES)	LEAD	0.000062 mg/L	0.000062U mg/L

Method Blank Outlier Report

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P15826FB222052A	6/10/2011 8:52:00 PM	COPPER	0.160 mg/Kg	DUP09-SA8N-QC-052611 SL-002-SA8N-SB-4.0-5.0 SL-002-SA8N-SB-9.0-10.0 SL-008-SA8N-SB-4.0-5.0 SL-008-SA8N-SB-9.0-10.0 SL-164-SA5DN-SS-0.0-0.5 SL-165-SA5DN-SS-0.0-0.5 SL-170-SA5DN-SS-0.0-0.5 SL-171-SA5DN-SS-0.0-0.5 SL-172-SA5DN-SS-0.0-0.5 SL-173-SA5DN-SS-0.0-0.5 SL-174-SA5DN-SS-0.0-0.5 SL-175-SA5DN-SS-0.0-0.5 SL-176-SA5DN-SS-0.0-0.5 SL-179-SA5DN-SS-0.0-0.5 SL-180-SA5DN-SS-0.0-0.5 SL-181-SA5DN-SS-0.0-0.5 SL-182-SA5DN-SS-0.0-0.5 SL-183-SA5DN-SS-0.0-0.5 SL-184-SA5DN-SS-0.0-0.5
P15826FB222348A	6/9/2011 11:48:00 PM	LEAD	0.0416 mg/Kg	DUP09-SA8N-QC-052611 SL-002-SA8N-SB-4.0-5.0 SL-002-SA8N-SB-9.0-10.0 SL-008-SA8N-SB-4.0-5.0 SL-008-SA8N-SB-9.0-10.0 SL-164-SA5DN-SS-0.0-0.5 SL-165-SA5DN-SS-0.0-0.5 SL-170-SA5DN-SS-0.0-0.5 SL-171-SA5DN-SS-0.0-0.5 SL-172-SA5DN-SS-0.0-0.5 SL-173-SA5DN-SS-0.0-0.5 SL-174-SA5DN-SS-0.0-0.5 SL-175-SA5DN-SS-0.0-0.5 SL-176-SA5DN-SS-0.0-0.5 SL-179-SA5DN-SS-0.0-0.5 SL-180-SA5DN-SS-0.0-0.5 SL-181-SA5DN-SS-0.0-0.5 SL-182-SA5DN-SS-0.0-0.5 SL-183-SA5DN-SS-0.0-0.5 SL-184-SA5DN-SS-0.0-0.5

Method: **8015M**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P52524AB321224A	6/4/2011 12:24:00 PM	EFH (C8-C11)	0.17 mg/L	EB09-SA5DN-SS-052611

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
EB09-SA5DN-SS-052611(REA3)	EFH (C8-C11)	0.40 mg/L	1.3U mg/L

Method Blank Outlier Report

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8015M**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P48483AB321813A	6/4/2011 6:13:00 PM	EFH (C30-C40)	1.4 mg/Kg	SL-171-SA5DN-SS-0.0-0.5 SL-175-SA5DN-SS-0.0-0.5

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB72B211210A	6/1/2011 12:10:00 PM	ACETONE METHYLENE CHLORIDE	8.6 ug/Kg 1.4 ug/Kg	DUP09-SA8N-QC-052611 SL-008-SA8N-SB-4.0-5.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP09-SA8N-QC-052611(RES)	ACETONE	9.8 ug/Kg	9.8U ug/Kg
DUP09-SA8N-QC-052611(RES)	METHYLENE CHLORIDE	1.6 ug/Kg	4.5U ug/Kg
SL-002-SA8N-SB-4.0-5.0(RES)	ACETONE	9.7 ug/Kg	9.9U ug/Kg
SL-002-SA8N-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.9 ug/Kg	5.0U ug/Kg
SL-008-SA8N-SB-4.0-5.0(RES)	ACETONE	9.9 ug/Kg	9.9U ug/Kg
SL-008-SA8N-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.6 ug/Kg	4.6U ug/Kg

Method: **8270C SIM**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
PLKWH15B261040	6/4/2011 10:40:00 AM	BIS(2-ETHYLHEXYL)PHTHALATE Di-n-octylphthalate	0.13 ug/L 0.053 ug/L	EB09-SA5DN-SS-052611 EB11-SA8N-SB-052611

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
EB09-SA5DN-SS-052611(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	0.059 ug/L	0.98U ug/L
EB11-SA8N-SB-052611(RES)	BIS(2-ETHYLHEXYL)PHTHALATE	0.058 ug/L	0.97U ug/L

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE166 Laboratory: LL

EDD Filename: DE166_v1 eQAPP Name: CDM_SSFL_110509

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-002-SA8N-SB-4.0-5.0MS SL-002-SA8N-SB-4.0-5.0MSD (SL-002-SA8N-SB-4.0-5.0)*	DIETHYLENE GLYCOL	51	54	59.00-109.00	-	DIETHYLENE GLYCOL	J (all detects) UJ (all non-detects)

Method: 8081A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-164-SA5DN-SS-0.0-0.5MS SL-164-SA5DN-SS-0.0-0.5MSD (SL-164-SA5DN-SS-0.0-0.5)	4,4'-DDE	171	-	18.00-161.00	-	4,4'-DDE	J(all detects)
	4,4'-DDT	230	227	10.00-176.00	-	4,4'-DDT	
	BETA-BHC	203	-	14.00-147.00	84 (50.00)	BETA-BHC	
	DIELDRIN	-	-	19.00-154.00	51 (50.00)	DIELDRIN	
	ENDRIN ALDEHYDE	-	-	10.00-148.00	46 (35.00)	ENDRIN ALDEHYDE	
	METHOXYCHLOR	149	-	32.00-147.00	-	METHOXYCHLOR	

Method: 8151A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-164-SA5DN-SS-0.0-0.5MSD (SL-164-SA5DN-SS-0.0-0.5)	2,4-D	-	-	17.00-180.00	78 (35.00)	2,4-D	J(all detects)
	DALAPON	-	-	10.00-125.00	62 (50.00)	DALAPON	
SL-164-SA5DN-SS-0.0-0.5MS SL-164-SA5DN-SS-0.0-0.5MSD (SL-164-SA5DN-SS-0.0-0.5)	MCPA	0	-	10.00-213.00	200 (50.00)	MCPA	J(all detects) R(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-002-SA8N-SB-4.0-5.0MS SL-002-SA8N-SB-4.0-5.0MSD (DUP09-SA8N-QC-052611 SL-002-SA8N-SB-4.0-5.0 SL-002-SA8N-SB-9.0-10.0 SL-008-SA8N-SB-4.0-5.0 SL-008-SA8N-SB-9.0-10.0 SL-164-SA5DN-SS-0.0-0.5 SL-165-SA5DN-SS-0.0-0.5 SL-170-SA5DN-SS-0.0-0.5 SL-171-SA5DN-SS-0.0-0.5 SL-172-SA5DN-SS-0.0-0.5 SL-173-SA5DN-SS-0.0-0.5 SL-174-SA5DN-SS-0.0-0.5 SL-175-SA5DN-SS-0.0-0.5 SL-176-SA5DN-SS-0.0-0.5 SL-179-SA5DN-SS-0.0-0.5 SL-180-SA5DN-SS-0.0-0.5 SL-181-SA5DN-SS-0.0-0.5 SL-182-SA5DN-SS-0.0-0.5 SL-183-SA5DN-SS-0.0-0.5 SL-184-SA5DN-SS-0.0-0.5)	ALUMINUM CALCIUM IRON MAGNESIUM POTASSIUM	4020 293 1258 579 135	3884 248 970 495 128	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - - -	ALUMINUM CALCIUM IRON MAGNESIUM POTASSIUM	J(all detects) Al, Ca, Fe, Mg No Qual, >4x
SL-002-SA8N-SB-4.0-5.0MS SL-002-SA8N-SB-4.0-5.0MSD (DUP09-SA8N-QC-052611 SL-002-SA8N-SB-4.0-5.0 SL-002-SA8N-SB-9.0-10.0 SL-008-SA8N-SB-4.0-5.0 SL-008-SA8N-SB-9.0-10.0 SL-164-SA5DN-SS-0.0-0.5 SL-165-SA5DN-SS-0.0-0.5 SL-170-SA5DN-SS-0.0-0.5 SL-171-SA5DN-SS-0.0-0.5 SL-172-SA5DN-SS-0.0-0.5 SL-173-SA5DN-SS-0.0-0.5 SL-174-SA5DN-SS-0.0-0.5 SL-175-SA5DN-SS-0.0-0.5 SL-176-SA5DN-SS-0.0-0.5 SL-179-SA5DN-SS-0.0-0.5 SL-180-SA5DN-SS-0.0-0.5 SL-181-SA5DN-SS-0.0-0.5 SL-182-SA5DN-SS-0.0-0.5 SL-183-SA5DN-SS-0.0-0.5 SL-184-SA5DN-SS-0.0-0.5)	MANGANESE	37	19	75.00-125.00	-	MANGANESE	No Qual, >4x

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-002-SA8N-SB-4.0-5.0MSD (SL-002-SA8N-SB-4.0-5.0)	2,4-DINITROPHENOL	-	-	20.00-143.00	65 (30.00)	2,4-DINITROPHENOL	J(all detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **300.0**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-002-SA8N-SB-4.0-5.0MS (DUP09-SA8N-QC-052611 SL-002-SA8N-SB-4.0-5.0 SL-002-SA8N-SB-9.0-10.0 SL-008-SA8N-SB-4.0-5.0 SL-008-SA8N-SB-9.0-10.0 SL-164-SA5DN-SS-0.0-0.5 SL-165-SA5DN-SS-0.0-0.5 SL-170-SA5DN-SS-0.0-0.5 SL-171-SA5DN-SS-0.0-0.5 SL-172-SA5DN-SS-0.0-0.5)	FLUORIDE	67	-	80.00-120.00	-	FLUORIDE	J(all detects) UJ(all non-detects)

Method: **6010B**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-002-SA8N-SB-4.0-5.0MS SL-002-SA8N-SB-4.0-5.0MSD (DUP09-SA8N-QC-052611 SL-002-SA8N-SB-4.0-5.0 SL-002-SA8N-SB-9.0-10.0 SL-008-SA8N-SB-4.0-5.0 SL-008-SA8N-SB-9.0-10.0 SL-164-SA5DN-SS-0.0-0.5 SL-165-SA5DN-SS-0.0-0.5 SL-171-SA5DN-SS-0.0-0.5 SL-172-SA5DN-SS-0.0-0.5 SL-173-SA5DN-SS-0.0-0.5 SL-174-SA5DN-SS-0.0-0.5 SL-175-SA5DN-SS-0.0-0.5 SL-176-SA5DN-SS-0.0-0.5 SL-179-SA5DN-SS-0.0-0.5 SL-180-SA5DN-SS-0.0-0.5 SL-181-SA5DN-SS-0.0-0.5 SL-182-SA5DN-SS-0.0-0.5 SL-183-SA5DN-SS-0.0-0.5 SL-184-SA5DN-SS-0.0-0.5)	TITANIUM	254	263	75.00-125.00	-	TITANIUM	No Qual, >4x

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6020**

Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-002-SA8N-SB-4.0-5.0MS **SL-002-SA8N-SB-4.0-5.0MSD** (DUP09-SA8N-QC-052611 SL -002-SA8N-SB-4.0-5.0 SL -002-SA8N-SB-9.0-10.0 SL -008-SA8N-SB-4.0-5.0 SL -008-SA8N-SB-9.0-10.0 SL -164-SA5DN-SS-0.0-0.5 SL -165-SA5DN-SS-0.0-0.5 SL -170-SA5DN-SS-0.0-0.5 SL -171-SA5DN-SS-0.0-0.5 SL -172-SA5DN-SS-0.0-0.5 SL -173-SA5DN-SS-0.0-0.5 SL -174-SA5DN-SS-0.0-0.5 SL -175-SA5DN-SS-0.0-0.5 SL -176-SA5DN-SS-0.0-0.5 SL -179-SA5DN-SS-0.0-0.5 SL -180-SA5DN-SS-0.0-0.5 SL -181-SA5DN-SS-0.0-0.5 SL -182-SA5DN-SS-0.0-0.5 SL -183-SA5DN-SS-0.0-0.5 SL -184-SA5DN-SS-0.0-0.5)	ARSENIC CHROMIUM LEAD NICKEL VANADIUM ZINC	- - - 137 169 194	151 131 146 152 193 192	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - - - -	ARSENIC CHROMIUM LEAD NICKEL VANADIUM ZINC	J(all detects) V, Zn No Qual, >4x
SL-002-SA8N-SB-4.0-5.0MS **SL-002-SA8N-SB-4.0-5.0MSD** (DUP09-SA8N-QC-052611 SL -002-SA8N-SB-4.0-5.0 SL -002-SA8N-SB-9.0-10.0 SL -008-SA8N-SB-4.0-5.0 SL -008-SA8N-SB-9.0-10.0 SL -164-SA5DN-SS-0.0-0.5 SL -165-SA5DN-SS-0.0-0.5 SL -170-SA5DN-SS-0.0-0.5 SL -171-SA5DN-SS-0.0-0.5 SL -172-SA5DN-SS-0.0-0.5 SL -173-SA5DN-SS-0.0-0.5 SL -174-SA5DN-SS-0.0-0.5 SL -175-SA5DN-SS-0.0-0.5 SL -176-SA5DN-SS-0.0-0.5 SL -179-SA5DN-SS-0.0-0.5 SL -180-SA5DN-SS-0.0-0.5 SL -181-SA5DN-SS-0.0-0.5 SL -182-SA5DN-SS-0.0-0.5 SL -183-SA5DN-SS-0.0-0.5 SL -184-SA5DN-SS-0.0-0.5)	ANTIMONY	33	31	75.00-125.00	-	ANTIMONY	J(all detects) UJ(all non-detects)
SL-002-SA8N-SB-4.0-5.0MS **SL-002-SA8N-SB-4.0-5.0MSD** (DUP09-SA8N-QC-052611 SL -002-SA8N-SB-4.0-5.0 SL -002-SA8N-SB-9.0-10.0 SL -008-SA8N-SB-4.0-5.0 SL -008-SA8N-SB-9.0-10.0 SL -164-SA5DN-SS-0.0-0.5 SL -165-SA5DN-SS-0.0-0.5 SL -170-SA5DN-SS-0.0-0.5 SL -171-SA5DN-SS-0.0-0.5 SL -172-SA5DN-SS-0.0-0.5 SL -173-SA5DN-SS-0.0-0.5 SL -174-SA5DN-SS-0.0-0.5 SL -175-SA5DN-SS-0.0-0.5 SL -176-SA5DN-SS-0.0-0.5 SL -179-SA5DN-SS-0.0-0.5 SL -180-SA5DN-SS-0.0-0.5 SL -181-SA5DN-SS-0.0-0.5 SL -182-SA5DN-SS-0.0-0.5 SL -183-SA5DN-SS-0.0-0.5 SL -184-SA5DN-SS-0.0-0.5)	BARIUM	207	213	75.00-125.00	-	BARIUM	No Qual, >4x

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 300.0
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-173-SA5DN-SS-0.0-0.5DUP (SL-173-SA5DN-SS-0.0-0.5 SL-174-SA5DN-SS-0.0-0.5 SL-175-SA5DN-SS-0.0-0.5 SL-176-SA5DN-SS-0.0-0.5 SL-179-SA5DN-SS-0.0-0.5 SL-180-SA5DN-SS-0.0-0.5 SL-181-SA5DN-SS-0.0-0.5 SL-182-SA5DN-SS-0.0-0.5 SL-183-SA5DN-SS-0.0-0.5 SL-184-SA5DN-SS-0.0-0.5)	Nitrate-NO3	24	20.00	No Qual, OK by difference
SL-002-SA8N-SB-4.0-5.0DUP (DUP09-SA8N-QC-052611 SL-002-SA8N-SB-4.0-5.0 SL-002-SA8N-SB-9.0-10.0 SL-008-SA8N-SB-4.0-5.0 SL-008-SA8N-SB-9.0-10.0 SL-164-SA5DN-SS-0.0-0.5 SL-165-SA5DN-SS-0.0-0.5 SL-170-SA5DN-SS-0.0-0.5 SL-171-SA5DN-SS-0.0-0.5 SL-172-SA5DN-SS-0.0-0.5)	FLUORIDE	26	20.00	No Qual, OK by difference

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-002-SA8N-SB-4.0-5.0DUP (DUP09-SA8N-QC-052611 SL-002-SA8N-SB-4.0-5.0 SL-002-SA8N-SB-9.0-10.0 SL-008-SA8N-SB-4.0-5.0 SL-008-SA8N-SB-9.0-10.0 SL-164-SA5DN-SS-0.0-0.5 SL-165-SA5DN-SS-0.0-0.5 SL-170-SA5DN-SS-0.0-0.5 SL-171-SA5DN-SS-0.0-0.5 SL-172-SA5DN-SS-0.0-0.5 SL-173-SA5DN-SS-0.0-0.5 SL-174-SA5DN-SS-0.0-0.5 SL-175-SA5DN-SS-0.0-0.5 SL-176-SA5DN-SS-0.0-0.5 SL-179-SA5DN-SS-0.0-0.5 SL-180-SA5DN-SS-0.0-0.5 SL-181-SA5DN-SS-0.0-0.5 SL-182-SA5DN-SS-0.0-0.5 SL-183-SA5DN-SS-0.0-0.5 SL-184-SA5DN-SS-0.0-0.5)	CADMIUM SILVER	22 22	20.00 20.00	No Qual, OK by difference

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7199
Matrix: SO

QC Sample ID (Associated Sample ID)	*Analyte*	*Sample RPD*	*eQAPP RPD*	*Flag*
SL-002-SA8N-SB-4.0-5.0DUP (DUP09-SA8N-QC-052611 SL-002-SA8N-SB-4.0-5.0 SL-002-SA8N-SB-9.0-10.0 SL-008-SA8N-SB-4.0-5.0 SL-008-SA8N-SB-9.0-10.0 SL-164-SA5DN-SS-0.0-0.5 SL-165-SA5DN-SS-0.0-0.5 SL-170-SA5DN-SS-0.0-0.5 SL-171-SA5DN-SS-0.0-0.5 SL-172-SA5DN-SS-0.0-0.5 SL-173-SA5DN-SS-0.0-0.5 SL-174-SA5DN-SS-0.0-0.5 SL-175-SA5DN-SS-0.0-0.5 SL-176-SA5DN-SS-0.0-0.5 SL-179-SA5DN-SS-0.0-0.5 SL-180-SA5DN-SS-0.0-0.5 SL-181-SA5DN-SS-0.0-0.5 SL-182-SA5DN-SS-0.0-0.5 SL-183-SA5DN-SS-0.0-0.5 SL-184-SA5DN-SS-0.0-0.5)	HEXAVALENT CHROMIUM	36	20.00	No Qual, OK by difference

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8081A
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11473AQ240711A P11473AY240724A (EB09-SA5DN-SS-052611)	4,4'-DDT ENDOSULFAN I HEPTACHLOR	133 130 130	129 - -	53.00-126.00 68.00-128.00 57.00-126.00	- - -	4,4'-DDT ENDOSULFAN I HEPTACHLOR	J (all detects)

Method: 8330A
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11518AQ241052A P11518AY241134A (EB09-SA5DN-SS-052611)	2,4,6-TRINITROTOLUENE PETN	110 121	110 121	76.00-109.00 80.00-120.00	- -	2,4,6-TRINITROTOLUENE PETN	J(all detects)

Method: 8151A
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11516AQ241612A (EB09-SA5DN-SS-052611)	MCPP	140	-	67.00-137.00	-	MCPP	J(all detects)

Method: 8270C
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P1WFLCSY260101 (EB09-SA5DN-SS-052611 EB11-SA8N-SB-052611)	BENZOIC ACID	-	-	10.00-69.00	83 (30.00)	BENZOIC ACID	J(all detects) UJ(all non-detects)

Method: 8270C SIM
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P1WHLCSQ261112 P1WHLCSY261144 (EB09-SA5DN-SS-052611 EB11-SA8N-SB-052611)	ANTHRACENE BENZO(A)PYRENE BENZO(B)FLUORANTHENE BENZO(K)FLUORANTHENE DIBENZO(A,H)ANTHRACENE Di-n-octylphthalate INDENO(1,2,3-CD)PYRENE N-NITROSODIMETHYLAMINE	- 136 139 146 138 - 134 90	112 141 142 146 141 147 136 -	66.00-111.00 60.00-127.00 69.00-123.00 59.00-130.00 55.00-134.00 57.00-145.00 69.00-124.00 36.00-89.00	- - - - - - - -	ANTHRACENE BENZO(A)PYRENE BENZO(B)FLUORANTHENE BENZO(K)FLUORANTHENE DIBENZO(A,H)ANTHRACENE Di-n-octylphthalate INDENO(1,2,3-CD)PYRENE N-NITROSODIMETHYLAMINE	J(all detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7470A
Matrix: AQ

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P15213DY222331 (EB09-SA5DN-SS-052611 EB11-SA8N-SB-052611)	MERCURY	-	89	90.00-115.00	-	MERCURY	J(all detects) UJ(all non-detects)

Method: 8081A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11545AQ240431A (SL-164-SA5DN-SS-0.0-0.5 SL-165-SA5DN-SS-0.0-0.5 SL-170-SA5DN-SS-0.0-0.5 SL-171-SA5DN-SS-0.0-0.5 SL-172-SA5DN-SS-0.0-0.5 SL-173-SA5DN-SS-0.0-0.5 SL-174-SA5DN-SS-0.0-0.5 SL-175-SA5DN-SS-0.0-0.5 SL-176-SA5DN-SS-0.0-0.5 SL-179-SA5DN-SS-0.0-0.5 SL-180-SA5DN-SS-0.0-0.5 SL-181-SA5DN-SS-0.0-0.5 SL-182-SA5DN-SS-0.0-0.5 SL-183-SA5DN-SS-0.0-0.5 SL-184-SA5DN-SS-0.0-0.5)	4,4'-DDT METHOXYCHLOR	131 139	- -	54.00-130.00 59.00-125.00	- -	4,4'-DDT METHOXYCHLOR	J(all detects)

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P11587AQ320825A (SL-179-SA5DN-SS-0.0-0.5)	EFH (C15-C20) EFH (C30-C40)	115 114	- -	66.00-113.00 66.00-113.00	- -	EFH (C15-C20) EFH (C30-C40)	J(all detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P15208EQ220144 (DUP09-SA8N-QC-052611 SL-002-SA8N-SB-4.0-5.0 SL-002-SA8N-SB-9.0-10.0 SL-008-SA8N-SB-4.0-5.0 SL-008-SA8N-SB-9.0-10.0 SL-164-SA5DN-SS-0.0-0.5 SL-165-SA5DN-SS-0.0-0.5 SL-170-SA5DN-SS-0.0-0.5 SL-171-SA5DN-SS-0.0-0.5 SL-172-SA5DN-SS-0.0-0.5 SL-173-SA5DN-SS-0.0-0.5 SL-174-SA5DN-SS-0.0-0.5 SL-175-SA5DN-SS-0.0-0.5 SL-176-SA5DN-SS-0.0-0.5 SL-179-SA5DN-SS-0.0-0.5 SL-180-SA5DN-SS-0.0-0.5 SL-181-SA5DN-SS-0.0-0.5 SL-182-SA5DN-SS-0.0-0.5 SL-183-SA5DN-SS-0.0-0.5 SL-184-SA5DN-SS-0.0-0.5)	ALUMINUM	78	-	80.00-120.00	-	ALUMINUM	No Qual, SRM within QC limits

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P15826FQ222351A (DUP09-SA8N-QC-052611 SL-002-SA8N-SB-4.0-5.0 SL-002-SA8N-SB-9.0-10.0 SL-008-SA8N-SB-4.0-5.0 SL-008-SA8N-SB-9.0-10.0 SL-164-SA5DN-SS-0.0-0.5 SL-165-SA5DN-SS-0.0-0.5 SL-170-SA5DN-SS-0.0-0.5 SL-171-SA5DN-SS-0.0-0.5 SL-172-SA5DN-SS-0.0-0.5 SL-173-SA5DN-SS-0.0-0.5 SL-174-SA5DN-SS-0.0-0.5 SL-175-SA5DN-SS-0.0-0.5 SL-176-SA5DN-SS-0.0-0.5 SL-179-SA5DN-SS-0.0-0.5 SL-180-SA5DN-SS-0.0-0.5 SL-181-SA5DN-SS-0.0-0.5 SL-182-SA5DN-SS-0.0-0.5 SL-183-SA5DN-SS-0.0-0.5 SL-184-SA5DN-SS-0.0-0.5)	ANTIMONY	67	-	80.00-120.00	-	ANTIMONY	No Qual, SRM within QC limits

Surrogate Outlier Report

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8081A
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-164-SA5DN-SS-0.0-0.5	TETRACHLORO-M-XYLENE	49	50.00-130.00	All Target Analytes	J (all detects) UJ (all non-detects)
SL-171-SA5DN-SS-0.0-0.5	DECACHLOROBIPHENYL	184	20.00-120.00	All Target Analytes	J(all detects)
SL-172-SA5DN-SS-0.0-0.5	DECACHLOROBIPHENYL	125	20.00-120.00	All Target Analytes	J(all detects)
SL-172-SA5DN-SS-0.0-0.5	TETRACHLORO-M-XYLENE	45	50.00-130.00	All Target Analytes	J(all detects) UJ(all non-detects)
SL-173-SA5DN-SS-0.0-0.5	DECACHLOROBIPHENYL	132	20.00-120.00	All Target Analytes	J(all detects)
SL-180-SA5DN-SS-0.0-0.5	DECACHLOROBIPHENYL	130	20.00-120.00	All Target Analytes	J(all detects)
SL-181-SA5DN-SS-0.0-0.5	DECACHLOROBIPHENYL	130	20.00-120.00	All Target Analytes	J(all detects)
SL-183-SA5DN-SS-0.0-0.5	DECACHLOROBIPHENYL	1024	20.00-120.00	All Target Analytes	J(all detects)

Method: 8082
Matrix: SO

Sample ID	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-173-SA5DN-SS-0.0-0.5	DECACHLOROBIPHENYL	39	45.00-120.00	All Target Analytes	J(all detects) UJ(all non-detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: PrepDE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-002-SA8N-SB-4.0-5.0	DUP09-SA8N-QC-052611			
MOISTURE	16.3	15.3	6		No Qualifiers Applied

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-002-SA8N-SB-4.0-5.0	DUP09-SA8N-QC-052611			
FLUORIDE	4.6	4.3	7	50.00	No Qualifiers Applied

Method: 6010B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-002-SA8N-SB-4.0-5.0	DUP09-SA8N-QC-052611			
ALUMINUM	28300	28700	1	50.00	No Qualifiers Applied
BORON	11.3	10.8	5	50.00	
CALCIUM	14300	10100	34	50.00	
IRON	35600	36000	1	50.00	
LITHIUM	26.0	27.3	5	50.00	
MAGNESIUM	7900	8080	2	50.00	
MANGANESE	430	303	35	50.00	
PHOSPHORUS	299	294	2	50.00	
POTASSIUM	3770	3730	1	50.00	
SODIUM	119	124	4	50.00	
STRONTIUM	51.1	50.0	2	50.00	
TIN	2.72	2.64	3	50.00	
TITANIUM	1460	1380	6	50.00	
Zirconium	4.41	3.92	12	50.00	

Method: 6020
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-002-SA8N-SB-4.0-5.0	DUP09-SA8N-QC-052611			
ANTIMONY	0.140	0.129	8	50.00	No Qualifiers Applied
ARSENIC	6.98	6.89	1	50.00	
BARIUM	113	129	13	50.00	
BERYLLIUM	0.842	0.889	5	50.00	
CADMIUM	0.229	0.284	21	50.00	
CHROMIUM	31.8	33.6	6	50.00	
COBALT	10.6	13.6	25	50.00	
COPPER	16.9	18.5	9	50.00	
LEAD	10.2	11.7	14	50.00	
MOLYBDENUM	0.327	0.396	19	50.00	
NICKEL	23.0	28.5	21	50.00	
SELENIUM	0.147	0.140	5	50.00	
SILVER	0.0264	0.0304	14	50.00	
THALLIUM	0.334	0.378	12	50.00	
VANADIUM	63.9	68.6	7	50.00	
ZINC	70.3	78.9	12	50.00	

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Field Duplicate RPD Report

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: PrepDE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7199
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-002-SA8N-SB-4.0-5.0	DUP09-SA8N-QC-052611			
HEXAVALENT CHROMIUM	0.49	0.38	25	50.00	No Qualifiers Applied

Method: 8260B
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-002-SA8N-SB-4.0-5.0	DUP09-SA8N-QC-052611			
ACETONE	9.7	9.8	1	50.00	No Qualifiers Applied
METHYLENE CHLORIDE	1.9	1.6	17	50.00	
TOLUENE	0.11	4.5 U	200	50.00	J(all detects) UJ(all non-detects)

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-002-SA8N-SB-4.0-5.0	DUP09-SA8N-QC-052611			
BIS(2-ETHYLHEXYL)PHTHALATE	22 U	12	200	50.00	J(all detects) UJ(all non-detects)

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-002-SA8N-SB-4.0-5.0	DUP09-SA8N-QC-052611			
PH	8.19	8.15	0	50.00	No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB09-SA5DN-SS-052611	LEAD	J	0.000071	0.0010	PQL	mg/L	J (all detects)
EB11-SA8N-SB-052611	LEAD	J	0.000062	0.0010	PQL	mg/L	J (all detects)

Method: 8015M

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB09-SA5DN-SS-052611	EFH (C8-C11)	J	0.40	1.3	PQL	mg/L	J (all detects)

Method: 8081A

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB09-SA5DN-SS-052611	HEPTACHLOR	J	0.0088	0.010	PQL	ug/L	J (all detects)

Method: 8260B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB11-SA8N-SB-052611	BENZENE	J	1	5	PQL	ug/L	J (all detects)
	TOLUENE	J	0.7	5	PQL	ug/L	

Method: 8270C SIM

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB09-SA5DN-SS-052611	1-METHYLNAPHTHALENE	J	0.032	0.049	PQL	ug/L	J (all detects)
	2-METHYLNAPHTHALENE	J	0.032	0.049	PQL	ug/L	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	0.059	0.98	PQL	ug/L	
	Di-n-butylphthalate	J	0.065	0.98	PQL	ug/L	
EB11-SA8N-SB-052611	1-METHYLNAPHTHALENE	J	0.033	0.048	PQL	ug/L	J (all detects)
	2-METHYLNAPHTHALENE	J	0.034	0.048	PQL	ug/L	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	0.058	0.97	PQL	ug/L	
	Di-n-butylphthalate	J	0.065	0.97	PQL	ug/L	

Reporting Limit Outliers

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8330A

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB09-SA5DN-SS-052611	RDX	J	0.58	0.60	PQL	ug/L	J (all detects)

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-171-SA5DN-SS-0.0-0.5	Nitrate-NO3	J	1.3	1.6	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP09-SA8N-QC-052611	TIN	J	2.64	11.6	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.92	5.79	PQL	mg/Kg	
SL-002-SA8N-SB-4.0-5.0	TIN	J	2.72	11.9	PQL	mg/Kg	J (all detects)
	Zirconium	J	4.41	5.97	PQL	mg/Kg	
SL-002-SA8N-SB-9.0-10.0	TIN	J	2.44	11.7	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.57	5.84	PQL	mg/Kg	
SL-008-SA8N-SB-4.0-5.0	TIN	J	2.53	11.4	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.48	5.72	PQL	mg/Kg	
SL-008-SA8N-SB-9.0-10.0	BORON	J	5.46	5.65	PQL	mg/Kg	J (all detects)
	TIN	J	2.65	11.3	PQL	mg/Kg	
	Zirconium	J	2.78	5.65	PQL	mg/Kg	
SL-164-SA5DN-SS-0.0-0.5	SODIUM	J	67.9	108	PQL	mg/Kg	J (all detects)
	TIN	J	2.45	10.8	PQL	mg/Kg	
	Zirconium	J	3.03	5.39	PQL	mg/Kg	
SL-165-SA5DN-SS-0.0-0.5	SODIUM	J	75.2	105	PQL	mg/Kg	J (all detects)
	TIN	J	2.37	10.5	PQL	mg/Kg	
	Zirconium	J	2.07	5.27	PQL	mg/Kg	
SL-170-SA5DN-SS-0.0-0.5	BORON	J	3.06	5.00	PQL	mg/Kg	J (all detects)
	SODIUM	J	56.5	100	PQL	mg/Kg	
	TIN	J	2.23	10.0	PQL	mg/Kg	
	Zirconium	J	0.906	5.00	PQL	mg/Kg	
SL-171-SA5DN-SS-0.0-0.5	BORON	J	3.71	5.21	PQL	mg/Kg	J (all detects)
	SODIUM	J	82.3	104	PQL	mg/Kg	
	TIN	J	2.24	10.4	PQL	mg/Kg	
SL-172-SA5DN-SS-0.0-0.5	BORON	J	4.94	5.24	PQL	mg/Kg	J (all detects)
	SODIUM	J	91.7	105	PQL	mg/Kg	
	TIN	J	2.17	10.5	PQL	mg/Kg	
	Zirconium	J	3.31	5.24	PQL	mg/Kg	
SL-173-SA5DN-SS-0.0-0.5	BORON	J	2.90	5.10	PQL	mg/Kg	J (all detects)
	SODIUM	J	63.1	102	PQL	mg/Kg	
	TIN	J	2.37	10.2	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-174-SA5DN-SS-0.0-0.5	BORON	J	2.86	5.10	PQL	mg/Kg	J (all detects)
	TIN	J	2.34	10.2	PQL	mg/Kg	
	Zirconium	J	1.27	5.10	PQL	mg/Kg	
SL-175-SA5DN-SS-0.0-0.5	BORON	J	3.38	5.21	PQL	mg/Kg	J (all detects)
	SODIUM	J	66.4	104	PQL	mg/Kg	
	TIN	J	2.16	10.4	PQL	mg/Kg	
	Zirconium	J	1.33	5.21	PQL	mg/Kg	
SL-176-SA5DN-SS-0.0-0.5	BORON	J	2.60	5.01	PQL	mg/Kg	J (all detects)
	SODIUM	J	61.7	100	PQL	mg/Kg	
	TIN	J	4.84	10.0	PQL	mg/Kg	
	Zirconium	J	1.06	5.01	PQL	mg/Kg	
SL-179-SA5DN-SS-0.0-0.5	BORON	J	3.23	5.24	PQL	mg/Kg	J (all detects)
	SODIUM	J	72.2	105	PQL	mg/Kg	
	TIN	J	2.39	10.5	PQL	mg/Kg	
	Zirconium	J	1.76	5.24	PQL	mg/Kg	
SL-180-SA5DN-SS-0.0-0.5	BORON	J	3.69	5.12	PQL	mg/Kg	J (all detects)
	SODIUM	J	84.5	102	PQL	mg/Kg	
	TIN	J	2.40	10.2	PQL	mg/Kg	
	Zirconium	J	1.67	5.12	PQL	mg/Kg	
SL-181-SA5DN-SS-0.0-0.5	BORON	J	4.59	5.13	PQL	mg/Kg	J (all detects)
	SODIUM	J	82.8	103	PQL	mg/Kg	
	TIN	J	2.27	10.3	PQL	mg/Kg	
	Zirconium	J	1.90	5.13	PQL	mg/Kg	
SL-182-SA5DN-SS-0.0-0.5	BORON	J	3.95	5.15	PQL	mg/Kg	J (all detects)
	SODIUM	J	96.7	103	PQL	mg/Kg	
	TIN	J	2.15	10.3	PQL	mg/Kg	
	Zirconium	J	1.92	5.15	PQL	mg/Kg	
SL-183-SA5DN-SS-0.0-0.5	BORON	J	3.11	4.98	PQL	mg/Kg	J (all detects)
	TIN	J	2.44	9.96	PQL	mg/Kg	
SL-184-SA5DN-SS-0.0-0.5	BORON	J	3.51	5.10	PQL	mg/Kg	J (all detects)
	SODIUM	J	78.2	102	PQL	mg/Kg	
	TIN	J	2.19	10.2	PQL	mg/Kg	
	Zirconium	J	1.87	5.10	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP09-SA8N-QC-052611	ANTIMONY	J	0.129	0.225	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.140	0.450	PQL	mg/Kg	
	SILVER	J	0.0304	0.112	PQL	mg/Kg	
SL-002-SA8N-SB-4.0-5.0	ANTIMONY	J	0.140	0.228	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.147	0.455	PQL	mg/Kg	
	SILVER	J	0.0264	0.114	PQL	mg/Kg	
SL-002-SA8N-SB-9.0-10.0	ANTIMONY	J	0.139	0.234	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0898	0.467	PQL	mg/Kg	
	SILVER	J	0.0453	0.117	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6020**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-008-SA8N-SB-4.0-5.0	ANTIMONY	J	0.128	0.229	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.125	0.457	PQL	mg/Kg	
	SILVER	J	0.0372	0.114	PQL	mg/Kg	
SL-008-SA8N-SB-9.0-10.0	ANTIMONY	J	0.0814	0.224	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0529	0.447	PQL	mg/Kg	
	SILVER	J	0.0394	0.112	PQL	mg/Kg	
SL-164-SA5DN-SS-0.0-0.5	ANTIMONY	J	0.179	0.213	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.221	0.427	PQL	mg/Kg	
	SILVER	J	0.0410	0.107	PQL	mg/Kg	
SL-165-SA5DN-SS-0.0-0.5	ANTIMONY	J	0.0721	0.209	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.128	0.418	PQL	mg/Kg	
	SILVER	J	0.0647	0.104	PQL	mg/Kg	
SL-170-SA5DN-SS-0.0-0.5	CADMIUM	J	0.0683	0.0981	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0474	0.392	PQL	mg/Kg	
SL-171-SA5DN-SS-0.0-0.5	ANTIMONY	J	0.0646	0.209	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.0725	0.417	PQL	mg/Kg	
SL-172-SA5DN-SS-0.0-0.5	ANTIMONY	J	0.0818	0.205	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.256	0.411	PQL	mg/Kg	
	SILVER	J	0.0272	0.103	PQL	mg/Kg	
SL-173-SA5DN-SS-0.0-0.5	ANTIMONY	J	0.0902	0.202	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.228	0.404	PQL	mg/Kg	
	SILVER	J	0.0392	0.101	PQL	mg/Kg	
SL-174-SA5DN-SS-0.0-0.5	ANTIMONY	J	0.111	0.206	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.180	0.412	PQL	mg/Kg	
	SILVER	J	0.0761	0.103	PQL	mg/Kg	
SL-175-SA5DN-SS-0.0-0.5	ANTIMONY	J	0.0802	0.206	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.129	0.413	PQL	mg/Kg	
	SILVER	J	0.0421	0.103	PQL	mg/Kg	
SL-176-SA5DN-SS-0.0-0.5	ANTIMONY	J	0.0871	0.200	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.178	0.401	PQL	mg/Kg	
SL-179-SA5DN-SS-0.0-0.5	ANTIMONY	J	0.102	0.208	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.120	0.415	PQL	mg/Kg	
	SILVER	J	0.0498	0.104	PQL	mg/Kg	
SL-180-SA5DN-SS-0.0-0.5	SELENIUM	J	0.0911	0.418	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0495	0.104	PQL	mg/Kg	
SL-181-SA5DN-SS-0.0-0.5	ANTIMONY	J	0.0858	0.207	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.126	0.414	PQL	mg/Kg	
	SILVER	J	0.0466	0.104	PQL	mg/Kg	
SL-182-SA5DN-SS-0.0-0.5	ANTIMONY	J	0.136	0.208	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.112	0.416	PQL	mg/Kg	
	SILVER	J	0.0367	0.104	PQL	mg/Kg	
SL-183-SA5DN-SS-0.0-0.5	SELENIUM	J	0.142	0.406	PQL	mg/Kg	J (all detects)
SL-184-SA5DN-SS-0.0-0.5	ANTIMONY	J	0.133	0.208	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.252	0.416	PQL	mg/Kg	
	SILVER	J	0.0547	0.104	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP09-SA8N-QC-052611	HEXAVALENT CHROMIUM	J	0.38	1.2	PQL	mg/Kg	J (all detects)
SL-002-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.49	1.2	PQL	mg/Kg	J (all detects)
SL-008-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.55	1.2	PQL	mg/Kg	J (all detects)
SL-165-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.85	1.1	PQL	mg/Kg	J (all detects)
SL-171-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.52	1.1	PQL	mg/Kg	J (all detects)
SL-173-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.83	1.1	PQL	mg/Kg	J (all detects)
SL-174-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.34	1.0	PQL	mg/Kg	J (all detects)
SL-175-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.50	1.1	PQL	mg/Kg	J (all detects)
SL-176-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.31	1.0	PQL	mg/Kg	J (all detects)
SL-179-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.43	1.0	PQL	mg/Kg	J (all detects)
SL-180-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.39	1.0	PQL	mg/Kg	J (all detects)
SL-181-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.29	1.1	PQL	mg/Kg	J (all detects)
SL-182-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.48	1.1	PQL	mg/Kg	J (all detects)
SL-184-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.30	1.1	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-008-SA8N-SB-9.0-10.0	MERCURY	J	0.0059	0.113	PQL	mg/Kg	J (all detects)
SL-164-SA5DN-SS-0.0-0.5	MERCURY	J	0.0128	0.107	PQL	mg/Kg	J (all detects)
SL-165-SA5DN-SS-0.0-0.5	MERCURY	J	0.0070	0.103	PQL	mg/Kg	J (all detects)
SL-170-SA5DN-SS-0.0-0.5	MERCURY	J	0.0068	0.0972	PQL	mg/Kg	J (all detects)
SL-171-SA5DN-SS-0.0-0.5	MERCURY	J	0.0150	0.105	PQL	mg/Kg	J (all detects)
SL-172-SA5DN-SS-0.0-0.5	MERCURY	J	0.0172	0.104	PQL	mg/Kg	J (all detects)
SL-173-SA5DN-SS-0.0-0.5	MERCURY	J	0.0207	0.101	PQL	mg/Kg	J (all detects)
SL-174-SA5DN-SS-0.0-0.5	MERCURY	J	0.0143	0.0999	PQL	mg/Kg	J (all detects)
SL-175-SA5DN-SS-0.0-0.5	MERCURY	J	0.0151	0.103	PQL	mg/Kg	J (all detects)
SL-176-SA5DN-SS-0.0-0.5	MERCURY	J	0.0050	0.0968	PQL	mg/Kg	J (all detects)
SL-179-SA5DN-SS-0.0-0.5	MERCURY	J	0.0083	0.104	PQL	mg/Kg	J (all detects)
SL-184-SA5DN-SS-0.0-0.5	MERCURY	J	0.0344	0.0997	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-175-SA5DN-SS-0.0-0.5	EFH (C15-C20)	J	6.0	13	PQL	mg/Kg	J (all detects)

Method: 8081A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-164-SA5DN-SS-0.0-0.5	BETA-BHC	J	0.12	0.18	PQL	ug/Kg	J (all detects)
	Chlordane	J	2.5	3.7	PQL	ug/Kg	
	ENDOSULFAN II	J	0.10	0.37	PQL	ug/Kg	
SL-165-SA5DN-SS-0.0-0.5	Chlordane	J	2.1	3.7	PQL	ug/Kg	J (all detects)
	HEPTACHLOR EPOXIDE	J	0.053	0.18	PQL	ug/Kg	
SL-171-SA5DN-SS-0.0-0.5	Chlordane	J	1.2	3.6	PQL	ug/Kg	J (all detects)
	gamma-BHC (Lindane)	J	0.041	0.18	PQL	ug/Kg	
SL-173-SA5DN-SS-0.0-0.5	Chlordane	J	2.3	3.6	PQL	ug/Kg	J (all detects)
	DELTA-BHC	J	0.067	0.17	PQL	ug/Kg	
SL-180-SA5DN-SS-0.0-0.5	ALDRIN	J	0.11	0.17	PQL	ug/Kg	J (all detects)
SL-184-SA5DN-SS-0.0-0.5	4,4'-DDE	J	0.23	0.36	PQL	ug/Kg	J (all detects)
	Chlordane	J	1.6	3.6	PQL	ug/Kg	
	ENDRIN KETONE	J	0.11	0.36	PQL	ug/Kg	
	HEPTACHLOR EPOXIDE	J	0.051	0.18	PQL	ug/Kg	
	MIREX	J	0.25	0.36	PQL	ug/Kg	

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-164-SA5DN-SS-0.0-0.5	AROCLOR 1260	J	1.4	1.9	PQL	ug/Kg	J (all detects)
SL-165-SA5DN-SS-0.0-0.5	AROCLOR 1260	J	0.45	1.8	PQL	ug/Kg	J (all detects)
SL-170-SA5DN-SS-0.0-0.5	AROCLOR 1260	J	1.7	1.8	PQL	ug/Kg	J (all detects)
SL-172-SA5DN-SS-0.0-0.5	AROCLOR 1260	J	1.1	1.8	PQL	ug/Kg	J (all detects)
	Aroclor 5460	J	2.8	3.6	PQL	ug/Kg	
SL-173-SA5DN-SS-0.0-0.5	Aroclor 5460	J	2.0	3.5	PQL	ug/Kg	J (all detects)
SL-174-SA5DN-SS-0.0-0.5	AROCLOR 1260	J	1.1	1.8	PQL	ug/Kg	J (all detects)
SL-175-SA5DN-SS-0.0-0.5	AROCLOR 1260	J	1.2	1.8	PQL	ug/Kg	J (all detects)
	Aroclor 5460	J	1.9	3.5	PQL	ug/Kg	
SL-179-SA5DN-SS-0.0-0.5	AROCLOR 1260	J	1.2	1.8	PQL	ug/Kg	J (all detects)
SL-180-SA5DN-SS-0.0-0.5	AROCLOR 1254	J	0.86	1.8	PQL	ug/Kg	J (all detects)
	AROCLOR 1260	J	0.52	1.8	PQL	ug/Kg	
	Aroclor 5460	J	1.5	3.4	PQL	ug/Kg	
SL-182-SA5DN-SS-0.0-0.5	AROCLOR 1254	J	0.74	1.8	PQL	ug/Kg	J (all detects)
	AROCLOR 1260	J	0.83	1.8	PQL	ug/Kg	
	Aroclor 5460	J	2.7	3.5	PQL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-184-SA5DN-SS-0.0-0.5	Aroclor 5460	J	3.2	3.5	PQL	ug/Kg	J (all detects)

Method: 8151A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-164-SA5DN-SS-0.0-0.5	MCPA	J	230	270	PQL	ug/Kg	J (all detects)
SL-170-SA5DN-SS-0.0-0.5	MCPA	J	160	260	PQL	ug/Kg	J (all detects)
SL-172-SA5DN-SS-0.0-0.5	MCPA	J	220	270	PQL	ug/Kg	J (all detects)
SL-180-SA5DN-SS-0.0-0.5	MCPA	J	210	260	PQL	ug/Kg	J (all detects)
SL-181-SA5DN-SS-0.0-0.5	2,4-DB	J	1.2	1.8	PQL	ug/Kg	J (all detects)
SL-182-SA5DN-SS-0.0-0.5	MCPP	J	160	260	PQL	ug/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP09-SA8N-QC-052611	METHYLENE CHLORIDE	J	1.6	4.5	PQL	ug/Kg	J (all detects)
SL-002-SA8N-SB-4.0-5.0	ACETONE	J	9.7	9.9	PQL	ug/Kg	J (all detects)
	METHYLENE CHLORIDE	J	1.9	5.0	PQL	ug/Kg	
	TOLUENE	J	0.11	5.0	PQL	ug/Kg	
SL-008-SA8N-SB-4.0-5.0	METHYLENE CHLORIDE	J	1.6	4.6	PQL	ug/Kg	J (all detects)

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-164-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	24	370	PQL	ug/Kg	J (all detects)
SL-170-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	18	340	PQL	ug/Kg	J (all detects)
SL-171-SA5DN-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	35	180	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	31	180	PQL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	39	180	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	23	180	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	24	180	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	31	350	PQL	ug/Kg	
	CHRYSENE	J	40	180	PQL	ug/Kg	
	FLUORANTHENE	J	43	180	PQL	ug/Kg	
	PYRENE	J	44	180	PQL	ug/Kg	
SL-172-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	28	360	PQL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-173-SA5DN-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	31	180	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	23	180	PQL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	34	180	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	21	180	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	26	350	PQL	ug/Kg	
	CHRYSENE	J	35	180	PQL	ug/Kg	
	FLUORANTHENE	J	69	180	PQL	ug/Kg	
	PHENANTHRENE	J	45	180	PQL	ug/Kg	
	PYRENE	J	55	180	PQL	ug/Kg	
SL-174-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	20	350	PQL	ug/Kg	J (all detects)
SL-175-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	34	360	PQL	ug/Kg	J (all detects)
SL-176-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	22	350	PQL	ug/Kg	J (all detects)
SL-179-SA5DN-SS-0.0-0.5	ANTHRACENE	J	62	170	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	160	170	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	100	170	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	100	170	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	29	350	PQL	ug/Kg	
	CARBAZOLE	J	27	170	PQL	ug/Kg	
	DIBENZO(A,H)ANTHRACENE	J	32	170	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	94	170	PQL	ug/Kg	
SL-180-SA5DN-SS-0.0-0.5	1-METHYLNAPHTHALENE	J	26	170	PQL	ug/Kg	J (all detects)
	2-METHYLNAPHTHALENE	J	31	170	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	28	350	PQL	ug/Kg	
	DIBENZOFURAN	J	150	170	PQL	ug/Kg	
	NAPHTHALENE	J	37	170	PQL	ug/Kg	
SL-181-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	22	350	PQL	ug/Kg	J (all detects)
SL-182-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	25	350	PQL	ug/Kg	J (all detects)
SL-183-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	38	340	PQL	ug/Kg	J (all detects)
SL-184-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	24	350	PQL	ug/Kg	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP09-SA8N-QC-052611	BIS(2-ETHYLHEXYL)PHTHALATE	J	12	21	PQL	ug/Kg	J (all detects)
SL-008-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	9.8	21	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	0.47	2.0	PQL	ug/Kg	
SL-008-SA8N-SB-9.0-10.0	BENZO(B)FLUORANTHENE	J	1.1	1.9	PQL	ug/Kg	J (all detects)
	BENZO(K)FLUORANTHENE	J	1.1	1.9	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	11	21	PQL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE166 **Laboratory: LL**

EDD Filename: DE166_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8270C SIM**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-164-SA5DN-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	0.77	1.8	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	0.83	1.8	PQL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	1.6	1.8	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	1.1	1.8	PQL	ug/Kg	
	Butylbenzylphthalate	J	6.9	20	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.1	1.8	PQL	ug/Kg	
	PHENANTHRENE	J	1.2	1.8	PQL	ug/Kg	
SL-165-SA5DN-SS-0.0-0.5	ANTHRACENE	J	2.5	9.0	PQL	ug/Kg	J (all detects)
	BIS(2-ETHYLHEXYL)PHTHALATE	J	64	97	PQL	ug/Kg	
	DIBENZO(A,H)ANTHRACENE	J	5.8	9.0	PQL	ug/Kg	
SL-172-SA5DN-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	3.7	9.0	PQL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	4.9	9.0	PQL	ug/Kg	
	CHRYSENE	J	4.7	9.0	PQL	ug/Kg	
	FLUORANTHENE	J	4.9	9.0	PQL	ug/Kg	
	PYRENE	J	7.1	9.0	PQL	ug/Kg	
SL-173-SA5DN-SS-0.0-0.5	ANTHRACENE	J	2.9	8.8	PQL	ug/Kg	J (all detects)
	BENZO(K)FLUORANTHENE	J	7.4	8.8	PQL	ug/Kg	
	DIBENZO(A,H)ANTHRACENE	J	4.3	8.8	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	7.9	8.8	PQL	ug/Kg	
SL-174-SA5DN-SS-0.0-0.5	CHRYSENE	J	1.8	8.7	PQL	ug/Kg	J (all detects)
SL-175-SA5DN-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	0.79	1.8	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	0.83	1.8	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	0.88	1.8	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	0.79	1.8	PQL	ug/Kg	
	CHRYSENE	J	1.4	1.8	PQL	ug/Kg	
	PHENANTHRENE	J	1.2	1.8	PQL	ug/Kg	
SL-176-SA5DN-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	0.97	1.7	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	0.87	1.7	PQL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	1.5	1.7	PQL	ug/Kg	
	CHRYSENE	J	1.4	1.7	PQL	ug/Kg	
	PHENANTHRENE	J	1.5	1.7	PQL	ug/Kg	
SL-182-SA5DN-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	1.2	1.8	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	0.80	1.8	PQL	ug/Kg	
	Butylbenzylphthalate	J	6.9	19	PQL	ug/Kg	
	CHRYSENE	J	0.80	1.8	PQL	ug/Kg	
	FLUORANTHENE	J	0.89	1.8	PQL	ug/Kg	
	PYRENE	J	0.96	1.8	PQL	ug/Kg	
SL-183-SA5DN-SS-0.0-0.5	BENZO(A)PYRENE	J	0.87	1.7	PQL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	1.5	1.7	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	0.81	1.7	PQL	ug/Kg	
	CHRYSENE	J	1.0	1.7	PQL	ug/Kg	
	PHENANTHRENE	J	0.82	1.7	PQL	ug/Kg	
	PYRENE	J	0.92	1.7	PQL	ug/Kg	
SL-184-SA5DN-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	4.4	8.8	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	3.3	8.8	PQL	ug/Kg	
	FLUORANTHENE	J	3.8	8.8	PQL	ug/Kg	
	PYRENE	J	4.4	8.8	PQL	ug/Kg	

LDC #: 26275X4 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/29/11
SDG #: DE166 ADR Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6010B/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates:
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	SW	Al, Ba, Ca, Fe, Mg, Mn, Ti, V, Zn >4X
VII.	Duplicate Sample Analysis	A	cd, Ag, <5X
VIII.	Laboratory Control Samples (LCS)	A	SRM
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	Ba, Cr, Pb, V.
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	SW	FB=21, 22 (No hits >5X)

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	SL-002-SA8N-SB-4.0-5.0	11	SL-173-SA5DN-SS-0.0-0.5	21	EB09-SA5DN-SS-052611	31	
2	SL-002-SA8N-SB-9.0-10.0	12	SL-174-SA5DN-SS-0.0-0.5	22	EB11-SA8N-SB-052611	32	
3	SL-008-SA8N-SB-4.0-5.0	13	SL-175-SA5DN-SS-0.0-0.5	23	SL-002-SA8N-SB-4.0-5.0MS	33	
4	SL-008-SA8N-SB-9.0-10.0	14	SL-176-SA5DN-SS-0.0-0.5	24	SL-002-SA8N-SB-4.0-5.0MSD	34	
5	DUP09-SA8N-QC-052611	15	SL-179-SA5DN-SS-0.0-0.5	25	SL-002-SA8N-SB-4.0-5.0DUP	35	
6	SL-164-SA5DN-SS-0.0-0.5	16	SL-180-SA5DN-SS-0.0-0.5	26		36	
7	SL-165-SA5DN-SS-0.0-0.5	17	SL-181-SA5DN-SS-0.0-0.5	27		37	
8	SL-170-SA5DN-SS-0.0-0.5	18	SL-182-SA5DN-SS-0.0-0.5	28		38	
9	SL-171-SA5DN-SS-0.0-0.5	19	SL-183-SA5DN-SS-0.0-0.5	29		39	
10	SL-172-SA5DN-SS-0.0-0.5	20	SL-184-SA5DN-SS-0.0-0.5	30		40	

Notes:

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: DE166
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6300336BKG Matrix Spike Lab Sample ID: 6300337MS Matrix Spike Duplicate Lab Sample ID: 6300338MSD
% Solids for Sample: 83.7
Batch Id(s): P15208E, P15826F, P15211D, P15708A

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	Control Limit RPD	M
Aluminum		28327.6523		37652.5733		37251.9047		231.9890	229.7583	MG/KG	4020		3884		1			20	P
Antimony	121	0.1399	B	0.5960		0.5756		1.3785	1.4195	MG/KG	33	N	31	N	3		75 - 125	20	MS
Arsenic	75	6.9750		9.8520		10.5563		2.2976	2.3658	MG/KG	125		151	N	7		75 - 125	20	MS
Barium	137	113.3072		137.0508		138.4956		11.4879	11.8291	MG/KG	207		213		1			20	MS
Beryllium	9	0.8422		1.7103		1.7479		0.9190	0.9463	MG/KG	94		96		2		75 - 125	20	MS
Boron		11.3190		236.6925		233.6182		231.9890	229.7583	MG/KG	97		97		1		84 - 115	20	P
Cadmium	111	0.2289		1.3574		1.4720		1.1488	1.1829	MG/KG	98		105		8		75 - 125	20	MS
Calcium		14293.6368		15651.6025		15434.4948		463.9779	459.5166	MG/KG	293		248		1			20	P
Chromium	52	31.8143		46.0665		47.3166		11.4879	11.8291	MG/KG	124		131	N	3		75 - 125	20	MS
Cobalt	59	10.6207		69.6397		70.9985		57.4396	59.1457	MG/KG	103		102		2		75 - 125	20	MS
Copper	63	16.9358		31.3161		31.6311		11.4879	11.8291	MG/KG	125		124		1		75 - 125	20	MS
Iron		35643.3453		37102.8233		36757.5533		115.9945	114.8791	MG/KG	1258		970		1			20	P
Lead	208	10.1724		12.8848		15.3661		3.4464	3.5487	MG/KG	79		146	N	18		75 - 125	20	MS
Lithium		26.0084		149.8196		146.6306		115.9945	114.8791	MG/KG	107		105		2		82 - 114	20	P
Magnesium		7900.1386		9243.9457		9037.9894		231.9890	229.7583	MG/KG	579		495		2			20	P
Manganese		430.4504		451.8797		441.3852		57.9972	57.4396	MG/KG	37		19		2			20	P
Mercury		0.0035	U	0.1717		0.1822		0.1914	0.1968	MG/KG	90		93		6		65 - 135	20	CV
Molybdenum	98	0.3272		10.2334		10.0453		11.4879	11.8291	MG/KG	86		82		2		75 - 125	20	MS
Nickel	60	22.9846		38.7372		40.9998		11.4879	11.8291	MG/KG	137	N	152	N	6		75 - 125	20	MS
Phosphorus		298.7993		429.1726		407.7612		115.9945	114.8791	MG/KG	112		95		5		75 - 125	20	P
Potassium		3772.9988		5344.6788		5247.2624		1159.9448	1148.7915	MG/KG	135	N	128	N	2		75 - 125	20	P
Selenium	78	0.1473	B	2.1080		2.0559		2.2976	2.3658	MG/KG	85		81		3		75 - 125	20	MS
Silver	107	0.0264	B	10.8928		10.9467		11.4879	11.8291	MG/KG	95		92		0		75 - 125	20	MS
Sodium		118.9546	B	1256.0659		1218.7046		1159.9448	1148.7915	MG/KG	98		96		3		75 - 125	20	P
Strontium		51.0932		167.7269		163.6499		115.9945	114.8791	MG/KG	101		98		2		75 - 115	20	P
Thallium	203	0.3338		0.7724		0.7866		0.4595	0.4732	MG/KG	95		96		2		75 - 125	20	MS
Tin		2.7180	B	401.6738		394.9384		463.9779	459.5166	MG/KG	86		85		2		80 - 110	20	P
Titanium		1459.8484		1754.1474		1767.5498		115.9945	117.1317	MG/KG	254		263		1			20	P
Vanadium	51	63.8562		83.2414		86.6839		11.4879	11.8291	MG/KG	169		193		4			20	MS
Zinc	66	70.3192		92.6385		93.0480		11.4879	11.8291	MG/KG	194		192		0			20	MS
Zirconium		4.4098	B	117.2542		114.4288		115.9945	114.8791	MG/KG	97		96		2		75 - 125	20	P

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: DE166.
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6300336BKG Serial Dilution Lab Sample ID: 6300336L
Batch ID(s): P15208E, P15826F, P15708A
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		237102.4500		228228.8000		4		P
Antimony	121	0.6147	B	1.5000	U	100		MS
Arsenic	75	30.6500		33.5400		9		MS
Barium	137	497.9000		570.5000		15	E	MS
Beryllium	9	3.7010		8.6100		133		MS
Boron		94.7400		47.1000	B	50		P
Cadmium	111	1.0060		1.8180	B	81		MS
Calcium		119637.7400		121137.1000		1		P
Chromium	52	139.8000		178.2000		27	E	MS
Cobalt	59	46.6700		49.0500		5		MS
Copper	63	74.4200		77.9500		5		MS
Iron		59666.9600		60155.3500		1		P
Lead	208	44.7000		54.5000		22	E	MS
Lithium		217.6900		217.7000		0		P
Magnesium		66124.1600		65942.2500		0		P
Manganese		3602.8700		3799.6000		5		P
Molybdenum	98	1.4380		2.2085	B	54		MS
Nickel	60	101.0000		103.8000		3		MS
Phosphorus		2500.9500		2491.7500		0		P
Potassium		31580.0000		31353.8000		1		P
Selenium	78	0.6473	B	1.0000	U	100		MS
Silver	107	0.1162	B	0.3000	U	100		MS
Sodium		995.6500	B	1865.0000	U	100		P
Strontium		427.6500		435.4500		2		P
Thallium	203	1.4670		1.6910	B	15		MS
Tin		22.7500	B	50.0000	U	100		P
Titanium		12463.3100		13174.1500		6		P
Vanadium	51	280.6000		336.7000		20	E	MS
Zinc	66	309.0000		326.7000		6		MS
Zirconium		36.9100	B	44.7000	B	21		P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS: DE166 7154
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

SAMPLE DELIVERY GROUP

DE167

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
27-May-2011	TB-052711	6301487	TB	5030B	8260B	III
27-May-2011	TB-052711	6301487	TB	5030B	8260B SIM	III
27-May-2011	SL-071-SA5DN-SS-0.0-0.5	6301472	N	3050B	6010B	III
27-May-2011	SL-071-SA5DN-SS-0.0-0.5	6301472	N	3050B	6020	III
27-May-2011	SL-071-SA5DN-SS-0.0-0.5	6301472	N	3060A	7199	III
27-May-2011	SL-071-SA5DN-SS-0.0-0.5	6301472	N	3550B	8081A	III
27-May-2011	SL-071-SA5DN-SS-0.0-0.5	6301472	N	3550B	8082	III
27-May-2011	SL-071-SA5DN-SS-0.0-0.5	6301472	N	3550B	8151A	III
27-May-2011	SL-071-SA5DN-SS-0.0-0.5	6301472	N	3550B	8270C	III
27-May-2011	SL-071-SA5DN-SS-0.0-0.5	6301472	N	3550B	8270C SIM	III
27-May-2011	SL-071-SA5DN-SS-0.0-0.5	6301472	N	METHOD	300.0	III
27-May-2011	SL-071-SA5DN-SS-0.0-0.5	6301472	N	METHOD	314.0	III
27-May-2011	SL-071-SA5DN-SS-0.0-0.5	6301472	N	METHOD	7471A	III
27-May-2011	SL-091-SA5DN-SS-0.0-0.5	6301473	N	3050B	6010B	III
27-May-2011	SL-091-SA5DN-SS-0.0-0.5	6301473	N	3050B	6020	III
27-May-2011	SL-091-SA5DN-SS-0.0-0.5	6301473	N	3060A	7199	III
27-May-2011	SL-091-SA5DN-SS-0.0-0.5	6301473	N	3550B	8081A	III
27-May-2011	SL-091-SA5DN-SS-0.0-0.5	6301473	N	3550B	8082	III
27-May-2011	SL-091-SA5DN-SS-0.0-0.5	6301473	N	3550B	8151A	III
27-May-2011	SL-091-SA5DN-SS-0.0-0.5	6301473	N	3550B	8270C	III
27-May-2011	SL-091-SA5DN-SS-0.0-0.5	6301473	N	3550B	8270C SIM	III
27-May-2011	SL-091-SA5DN-SS-0.0-0.5	6301473	N	METHOD	300.0	III
27-May-2011	SL-091-SA5DN-SS-0.0-0.5	6301473	N	METHOD	314.0	III
27-May-2011	SL-091-SA5DN-SS-0.0-0.5	6301473	N	METHOD	6850	III
27-May-2011	SL-091-SA5DN-SS-0.0-0.5	6301473	N	METHOD	7471A	III
27-May-2011	SL-003-SA8N-SB-4.0-5.0	6301485	N	3050B	6010B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
27-May-2011	SL-003-SA8N-SB-4.0-5.0	6301485	N	3050B	6020	III
27-May-2011	SL-003-SA8N-SB-4.0-5.0	6301485	N	3060A	7199	III
27-May-2011	SL-003-SA8N-SB-4.0-5.0	6301485	N	3550B	8082	III
27-May-2011	SL-003-SA8N-SB-4.0-5.0	6301485	N	3550B	8270C	III
27-May-2011	SL-003-SA8N-SB-4.0-5.0	6301485	N	3550B	8270C SIM	III
27-May-2011	SL-003-SA8N-SB-4.0-5.0	6301485	N	5035	8260B	III
27-May-2011	SL-003-SA8N-SB-4.0-5.0	6301485	N	5035	8260B SIM	III
27-May-2011	SL-003-SA8N-SB-4.0-5.0	6301485	N	METHOD	300.0	III
27-May-2011	SL-003-SA8N-SB-4.0-5.0	6301485	N	METHOD	314.0	III
27-May-2011	SL-003-SA8N-SB-4.0-5.0	6301485	N	METHOD	7471A	III
27-May-2011	SL-003-SA8N-SB-4.0-5.0	6301485	N	METHOD	8015M	III
27-May-2011	SL-003-SA8N-SB-4.0-5.0DUP	P301485D271900B	DUP	METHOD	314.0	III
27-May-2011	SL-003-SA8N-SB-4.0-5.0MS	P301485R271923B	MS	METHOD	314.0	III
27-May-2011	SL-122-SA5DN-SS-0.0-0.5	6301483	N	3050B	6010B	III
27-May-2011	SL-122-SA5DN-SS-0.0-0.5	6301483	N	3050B	6020	III
27-May-2011	SL-122-SA5DN-SS-0.0-0.5	6301483	N	3060A	7199	III
27-May-2011	SL-122-SA5DN-SS-0.0-0.5	6301483	N	3550B	8081A	III
27-May-2011	SL-122-SA5DN-SS-0.0-0.5	6301483	N	3550B	8082	III
27-May-2011	SL-122-SA5DN-SS-0.0-0.5	6301483	N	3550B	8151A	III
27-May-2011	SL-122-SA5DN-SS-0.0-0.5	6301483	N	3550B	8270C	III
27-May-2011	SL-122-SA5DN-SS-0.0-0.5	6301483	N	3550B	8270C SIM	III
27-May-2011	SL-122-SA5DN-SS-0.0-0.5	6301483	N	METHOD	300.0	III
27-May-2011	SL-122-SA5DN-SS-0.0-0.5	6301483	N	METHOD	314.0	III
27-May-2011	SL-122-SA5DN-SS-0.0-0.5	6301483	N	METHOD	7471A	III
27-May-2011	SL-003-SA8N-SB-9.0-10.0	6301486	N	3050B	6010B	III
27-May-2011	SL-003-SA8N-SB-9.0-10.0	6301486	N	3050B	6020	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
27-May-2011	SL-003-SA8N-SB-9.0-10.0	6301486	N	3060A	7199	III
27-May-2011	SL-003-SA8N-SB-9.0-10.0	6301486	N	3550B	8082	III
27-May-2011	SL-003-SA8N-SB-9.0-10.0	6301486	N	3550B	8270C	III
27-May-2011	SL-003-SA8N-SB-9.0-10.0	6301486	N	3550B	8270C SIM	III
27-May-2011	SL-003-SA8N-SB-9.0-10.0	6301486	N	METHOD	300.0	III
27-May-2011	SL-003-SA8N-SB-9.0-10.0	6301486	N	METHOD	314.0	III
27-May-2011	SL-003-SA8N-SB-9.0-10.0	6301486	N	METHOD	6850	III
27-May-2011	SL-003-SA8N-SB-9.0-10.0	6301486	N	METHOD	7471A	III
27-May-2011	SL-003-SA8N-SB-9.0-10.0	6301486	N	METHOD	8015M	III
27-May-2011	SL-092-SA5DN-SS-0.0-0.5	6301474	N	3050B	6010B	III
27-May-2011	SL-092-SA5DN-SS-0.0-0.5	6301474	N	3050B	6020	III
27-May-2011	SL-092-SA5DN-SS-0.0-0.5	6301474	N	3060A	7199	III
27-May-2011	SL-092-SA5DN-SS-0.0-0.5	6301474	N	3550B	8081A	III
27-May-2011	SL-092-SA5DN-SS-0.0-0.5	6301474	N	3550B	8082	III
27-May-2011	SL-092-SA5DN-SS-0.0-0.5	6301474	N	3550B	8151A	III
27-May-2011	SL-092-SA5DN-SS-0.0-0.5	6301474	N	3550B	8270C	III
27-May-2011	SL-092-SA5DN-SS-0.0-0.5	6301474	N	3550B	8270C SIM	III
27-May-2011	SL-092-SA5DN-SS-0.0-0.5	6301474	N	METHOD	300.0	III
27-May-2011	SL-092-SA5DN-SS-0.0-0.5	6301474	N	METHOD	314.0	III
27-May-2011	SL-092-SA5DN-SS-0.0-0.5	6301474	N	METHOD	7471A	III
27-May-2011	SL-093-SA5DN-SS-0.0-0.5	6301475	N	3050B	6010B	III
27-May-2011	SL-093-SA5DN-SS-0.0-0.5	6301475	N	3050B	6020	III
27-May-2011	SL-093-SA5DN-SS-0.0-0.5	6301475	N	3060A	7199	III
27-May-2011	SL-093-SA5DN-SS-0.0-0.5	6301475	N	3550B	8081A	III
27-May-2011	SL-093-SA5DN-SS-0.0-0.5	6301475	N	3550B	8082	III
27-May-2011	SL-093-SA5DN-SS-0.0-0.5	6301475	N	3550B	8151A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
27-May-2011	SL-093-SA5DN-SS-0.0-0.5	6301475	N	3550B	8270C	III
27-May-2011	SL-093-SA5DN-SS-0.0-0.5	6301475	N	3550B	8270C SIM	III
27-May-2011	SL-093-SA5DN-SS-0.0-0.5	6301475	N	METHOD	300.0	III
27-May-2011	SL-093-SA5DN-SS-0.0-0.5	6301475	N	METHOD	314.0	III
27-May-2011	SL-093-SA5DN-SS-0.0-0.5	6301475	N	METHOD	7471A	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5	6301476	N	3050B	6010B	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5	6301476	N	3050B	6020	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5	6301476	N	3060A	7199	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5	6301476	N	3546	1625C	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5	6301476	N	3550B	8015B	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5	6301476	N	3550B	8015M	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5	6301476	N	3550B	8081A	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5	6301476	N	3550B	8082	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5	6301476	N	3550B	8151A	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5	6301476	N	3550B	8270C	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5	6301476	N	3550B	8270C SIM	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5	6301476	N	8330	8330A	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5	6301476	N	METHOD	300.0	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5	6301476	N	METHOD	314.0	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5	6301476	N	METHOD	7471A	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5	6301476	N	METHOD	8015B	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5	6301476	N	METHOD	8015M	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5	6301476	N	METHOD	8315A	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5	6301476	N	METHOD	9012B	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5MS	6301477	MS	3050B	6010B	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5MS	6301477	MS	3050B	6020	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
27-May-2011	SL-117-SA5DN-SS-0.0-0.5MS	6301477	MS	3060A	7199	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5MS	6301477	MS	3546	1625C	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5MS	6301477	MS	3550B	8015B	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5MS	6301477	MS	3550B	8015M	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5MS	6301477	MS	3550B	8081A	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5MS	6301477	MS	3550B	8082	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5MS	6301477	MS	3550B	8151A	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5MS	6301477	MS	3550B	8270C	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5MS	6301477	MS	3550B	8270C SIM	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5MS	6301477	MS	8330	8330A	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5MS	6301477	MS	METHOD	300.0	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5MS	6301477	MS	METHOD	314.0	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5MS	6301477	MS	METHOD	7471A	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5MS	6301477	MS	METHOD	8015B	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5MS	6301477	MS	METHOD	8015M	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5MS	6301477	MS	METHOD	8315A	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5MS	6301477	MS	METHOD	9012B	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5DU	6301479	DUP	3050B	6010B	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5DU	6301479	DUP	3050B	6020	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5DU	6301479	DUP	3060A	7199	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5DU	6301479	DUP	METHOD	300.0	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5DU	6301479	DUP	METHOD	314.0	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5DU	6301479	DUP	METHOD	7471A	III
27-May-2011	SL-117-SA5DN-SS-0.0-0.5DU	6301479	DUP	METHOD	9012B	III
27-May-2011	DUP09-SA5DN-QC-052711	6301484	FD	3050B	6010B	III
27-May-2011	DUP09-SA5DN-QC-052711	6301484	FD	3050B	6020	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
27-May-2011	DUP09-SA5DN-QC-052711	6301484	FD	3060A	7199	III
27-May-2011	DUP09-SA5DN-QC-052711	6301484	FD	3546	1625C	III
27-May-2011	DUP09-SA5DN-QC-052711	6301484	FD	3550B	8015B	III
27-May-2011	DUP09-SA5DN-QC-052711	6301484	FD	3550B	8015M	III
27-May-2011	DUP09-SA5DN-QC-052711	6301484	FD	3550B	8081A	III
27-May-2011	DUP09-SA5DN-QC-052711	6301484	FD	3550B	8082	III
27-May-2011	DUP09-SA5DN-QC-052711	6301484	FD	3550B	8151A	III
27-May-2011	DUP09-SA5DN-QC-052711	6301484	FD	3550B	8270C	III
27-May-2011	DUP09-SA5DN-QC-052711	6301484	FD	3550B	8270C SIM	III
27-May-2011	DUP09-SA5DN-QC-052711	6301484	FD	8330	8330A	III
27-May-2011	DUP09-SA5DN-QC-052711	6301484	FD	METHOD	300.0	III
27-May-2011	DUP09-SA5DN-QC-052711	6301484	FD	METHOD	314.0	III
27-May-2011	DUP09-SA5DN-QC-052711	6301484	FD	METHOD	7471A	III
27-May-2011	DUP09-SA5DN-QC-052711	6301484	FD	METHOD	8015B	III
27-May-2011	DUP09-SA5DN-QC-052711	6301484	FD	METHOD	8015M	III
27-May-2011	DUP09-SA5DN-QC-052711	6301484	FD	METHOD	8315A	III
27-May-2011	DUP09-SA5DN-QC-052711	6301484	FD	METHOD	9012B	III
27-May-2011	SL-118-SA5DN-SS-0.0-0.5	6301480	N	3050B	6010B	III
27-May-2011	SL-118-SA5DN-SS-0.0-0.5	6301480	N	3050B	6020	III
27-May-2011	SL-118-SA5DN-SS-0.0-0.5	6301480	N	3060A	7199	III
27-May-2011	SL-118-SA5DN-SS-0.0-0.5	6301480	N	3546	1625C	III
27-May-2011	SL-118-SA5DN-SS-0.0-0.5	6301480	N	3550B	8015B	III
27-May-2011	SL-118-SA5DN-SS-0.0-0.5	6301480	N	3550B	8015M	III
27-May-2011	SL-118-SA5DN-SS-0.0-0.5	6301480	N	3550B	8081A	III
27-May-2011	SL-118-SA5DN-SS-0.0-0.5	6301480	N	3550B	8082	III
27-May-2011	SL-118-SA5DN-SS-0.0-0.5	6301480	N	3550B	8151A	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
27-May-2011	SL-118-SA5DN-SS-0.0-0.5	6301480	N	3550B	8270C	III
27-May-2011	SL-118-SA5DN-SS-0.0-0.5	6301480	N	3550B	8270C SIM	III
27-May-2011	SL-118-SA5DN-SS-0.0-0.5	6301480	N	8330	8330A	III
27-May-2011	SL-118-SA5DN-SS-0.0-0.5	6301480	N	METHOD	300.0	III
27-May-2011	SL-118-SA5DN-SS-0.0-0.5	6301480	N	METHOD	314.0	III
27-May-2011	SL-118-SA5DN-SS-0.0-0.5	6301480	N	METHOD	7471A	III
27-May-2011	SL-118-SA5DN-SS-0.0-0.5	6301480	N	METHOD	8015B	III
27-May-2011	SL-118-SA5DN-SS-0.0-0.5	6301480	N	METHOD	8015M	III
27-May-2011	SL-118-SA5DN-SS-0.0-0.5	6301480	N	METHOD	8315A	III
27-May-2011	SL-118-SA5DN-SS-0.0-0.5	6301480	N	METHOD	9012B	III
27-May-2011	SL-120-SA5DN-SS-0.0-0.5	6301482	N	3050B	6010B	III
27-May-2011	SL-120-SA5DN-SS-0.0-0.5	6301482	N	3050B	6020	III
27-May-2011	SL-120-SA5DN-SS-0.0-0.5	6301482	N	3060A	7199	III
27-May-2011	SL-120-SA5DN-SS-0.0-0.5	6301482	N	3546	1625C	III
27-May-2011	SL-120-SA5DN-SS-0.0-0.5	6301482	N	3550B	8015B	III
27-May-2011	SL-120-SA5DN-SS-0.0-0.5	6301482	N	3550B	8015M	III
27-May-2011	SL-120-SA5DN-SS-0.0-0.5	6301482	N	3550B	8081A	III
27-May-2011	SL-120-SA5DN-SS-0.0-0.5	6301482	N	3550B	8082	III
27-May-2011	SL-120-SA5DN-SS-0.0-0.5	6301482	N	3550B	8151A	III
27-May-2011	SL-120-SA5DN-SS-0.0-0.5	6301482	N	3550B	8270C	III
27-May-2011	SL-120-SA5DN-SS-0.0-0.5	6301482	N	3550B	8270C SIM	III
27-May-2011	SL-120-SA5DN-SS-0.0-0.5	6301482	N	8330	8330A	III
27-May-2011	SL-120-SA5DN-SS-0.0-0.5	6301482	N	METHOD	300.0	III
27-May-2011	SL-120-SA5DN-SS-0.0-0.5	6301482	N	METHOD	314.0	III
27-May-2011	SL-120-SA5DN-SS-0.0-0.5	6301482	N	METHOD	7471A	III
27-May-2011	SL-120-SA5DN-SS-0.0-0.5	6301482	N	METHOD	8015B	III

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IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
27-May-2011	SL-120-SA5DN-SS-0.0-0.5	6301482	N	METHOD	8015M	III
27-May-2011	SL-120-SA5DN-SS-0.0-0.5	6301482	N	METHOD	8315A	III
27-May-2011	SL-120-SA5DN-SS-0.0-0.5	6301482	N	METHOD	9012B	III
27-May-2011	SL-119-SA5DN-SS-0.0-0.5	6301481	N	3050B	6010B	III
27-May-2011	SL-119-SA5DN-SS-0.0-0.5	6301481	N	3050B	6020	III
27-May-2011	SL-119-SA5DN-SS-0.0-0.5	6301481	N	3060A	7199	III
27-May-2011	SL-119-SA5DN-SS-0.0-0.5	6301481	N	3546	1625C	III
27-May-2011	SL-119-SA5DN-SS-0.0-0.5	6301481	N	3550B	8015B	III
27-May-2011	SL-119-SA5DN-SS-0.0-0.5	6301481	N	3550B	8015M	III
27-May-2011	SL-119-SA5DN-SS-0.0-0.5	6301481	N	3550B	8081A	III
27-May-2011	SL-119-SA5DN-SS-0.0-0.5	6301481	N	3550B	8082	III
27-May-2011	SL-119-SA5DN-SS-0.0-0.5	6301481	N	3550B	8151A	III
27-May-2011	SL-119-SA5DN-SS-0.0-0.5	6301481	N	3550B	8270C	III
27-May-2011	SL-119-SA5DN-SS-0.0-0.5	6301481	N	3550B	8270C SIM	III
27-May-2011	SL-119-SA5DN-SS-0.0-0.5	6301481	N	8330	8330A	III
27-May-2011	SL-119-SA5DN-SS-0.0-0.5	6301481	N	METHOD	300.0	III
27-May-2011	SL-119-SA5DN-SS-0.0-0.5	6301481	N	METHOD	314.0	III
27-May-2011	SL-119-SA5DN-SS-0.0-0.5	6301481	N	METHOD	7471A	III
27-May-2011	SL-119-SA5DN-SS-0.0-0.5	6301481	N	METHOD	8015B	III
27-May-2011	SL-119-SA5DN-SS-0.0-0.5	6301481	N	METHOD	8015M	III
27-May-2011	SL-119-SA5DN-SS-0.0-0.5	6301481	N	METHOD	8315A	III
27-May-2011	SL-119-SA5DN-SS-0.0-0.5	6301481	N	METHOD	9012B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE167 Laboratory: LL

EDD Filename: PrepDE167_v1 eQAPP Name: CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 Matrix: SO

Sample ID: SL-122-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 9:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	1.1	J	0.95	MDL	1.2	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6010B Matrix: SO

Sample ID: DUP09-SA5DN-QC-052711 *Collected:* 5/27/2011 10:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	503		0.0829	MDL	0.531	PQL	mg/Kg	J	A
SODIUM	92.8	J	39.6	MDL	106	PQL	mg/Kg	J	Z
TIN	2.59	J	1.06	MDL	10.6	PQL	mg/Kg	U	B
Zirconium	3.46	J	0.892	MDL	5.31	PQL	mg/Kg	J	Z

Sample ID: SL-003-SA8N-SB-4.0-5.0 *Collected:* 5/27/2011 9:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	442		0.0915	MDL	0.587	PQL	mg/Kg	J	A
TIN	2.76	J	1.17	MDL	11.7	PQL	mg/Kg	U	B
Zirconium	2.43	J	0.985	MDL	5.87	PQL	mg/Kg	J	Z

Sample ID: SL-003-SA8N-SB-9.0-10.0 *Collected:* 5/27/2011 9:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	401		0.0964	MDL	0.618	PQL	mg/Kg	J	A
TIN	2.67	J	1.24	MDL	12.4	PQL	mg/Kg	U	B
Zirconium	4.26	J	1.04	MDL	6.18	PQL	mg/Kg	J	Z

Sample ID: SL-071-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 8:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	347		0.0857	MDL	0.549	PQL	mg/Kg	J	A
TIN	2.56	J	1.10	MDL	11.0	PQL	mg/Kg	U	B
Zirconium	3.11	J	0.923	MDL	5.49	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE167 Laboratory: LL

EDD Filename: PrepDE167_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-091-SA5DN-SS-0.0-0.5 **Collected:** 5/27/2011 9:05:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	463		0.0828	MDL	0.531	PQL	mg/Kg	J	A
SODIUM	95.2	J	39.6	MDL	106	PQL	mg/Kg	J	Z
TIN	2.72	J	1.06	MDL	10.6	PQL	mg/Kg	U	B
Zirconium	3.34	J	0.891	MDL	5.31	PQL	mg/Kg	J	Z

Sample ID: SL-092-SA5DN-SS-0.0-0.5 **Collected:** 5/27/2011 9:45:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	449		0.0863	MDL	0.553	PQL	mg/Kg	J	A
SODIUM	89.2	J	41.3	MDL	111	PQL	mg/Kg	J	Z
TIN	2.66	J	1.11	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	3.92	J	0.929	MDL	5.53	PQL	mg/Kg	J	Z

Sample ID: SL-093-SA5DN-SS-0.0-0.5 **Collected:** 5/27/2011 10:05:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	452		0.0820	MDL	0.525	PQL	mg/Kg	J	A
SODIUM	92.0	J	39.2	MDL	105	PQL	mg/Kg	J	Z
TIN	2.64	J	1.05	MDL	10.5	PQL	mg/Kg	U	B
Zirconium	3.78	J	0.883	MDL	5.25	PQL	mg/Kg	J	Z

Sample ID: SL-117-SA5DN-SS-0.0-0.5 **Collected:** 5/27/2011 10:45:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	464		0.0845	MDL	0.542	PQL	mg/Kg	J	A
SODIUM	101	J	40.4	MDL	108	PQL	mg/Kg	J	Z
TIN	2.75	J	1.08	MDL	10.8	PQL	mg/Kg	U	B
Zirconium	4.09	J	0.910	MDL	5.42	PQL	mg/Kg	J	Z

Sample ID: SL-118-SA5DN-SS-0.0-0.5 **Collected:** 5/27/2011 11:05:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	484		0.0850	MDL	0.545	PQL	mg/Kg	J	A
SODIUM	95.6	J	40.6	MDL	109	PQL	mg/Kg	J	Z
TIN	2.65	J	1.09	MDL	10.9	PQL	mg/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE167 **Laboratory:** LL

EDD Filename: PrepDE167_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6010B **Matrix:** SO

Sample ID: SL-118-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Zirconium	3.47	J	0.915	MDL	5.45	PQL	mg/Kg	J	Z

Sample ID: SL-119-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	463		0.0831	MDL	0.533	PQL	mg/Kg	J	A
SODIUM	87.5	J	39.8	MDL	107	PQL	mg/Kg	J	Z
TIN	2.59	J	1.07	MDL	10.7	PQL	mg/Kg	U	B
Zirconium	2.94	J	0.895	MDL	5.33	PQL	mg/Kg	J	Z

Sample ID: SL-120-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	488		0.0824	MDL	0.528	PQL	mg/Kg	J	A
SODIUM	92.5	J	39.4	MDL	106	PQL	mg/Kg	J	Z
TIN	2.79	J	1.06	MDL	10.6	PQL	mg/Kg	U	B
Zirconium	3.04	J	0.888	MDL	5.28	PQL	mg/Kg	J	Z

Sample ID: SL-122-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 9:25:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	473		0.0922	MDL	0.591	PQL	mg/Kg	J	A

Sample ID: SL-122-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 9:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	96.5	J	44.1	MDL	118	PQL	mg/Kg	J	Z
TIN	3.07	J	1.18	MDL	11.8	PQL	mg/Kg	U	B
Zirconium	4.09	J	0.993	MDL	5.91	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE167 Laboratory: LL

EDD Filename: PrepDE167_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: DUP09-SA5DN-QC-052711 *Collected:* 5/27/2011 10:55:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.897		0.0175	MDL	0.109	PQL	mg/Kg	J	Q

Sample ID: DUP09-SA5DN-QC-052711 *Collected:* 5/27/2011 10:55:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.193	J	0.0438	MDL	0.438	PQL	mg/Kg	J	Z

Sample ID: DUP09-SA5DN-QC-052711 *Collected:* 5/27/2011 10:55:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.101	J	0.0656	MDL	0.219	PQL	mg/Kg	J	Z, Q, Q
LEAD	13.6		0.0114	MDL	0.219	PQL	mg/Kg	J	Q
SILVER	0.0556	J	0.0131	MDL	0.109	PQL	mg/Kg	J	Z

Sample ID: SL-003-SA8N-SB-4.0-5.0 *Collected:* 5/27/2011 9:10:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	1.03		0.0181	MDL	0.113	PQL	mg/Kg	J	Q

Sample ID: SL-003-SA8N-SB-4.0-5.0 *Collected:* 5/27/2011 9:10:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.140	J	0.0451	MDL	0.451	PQL	mg/Kg	J	Z

Sample ID: SL-003-SA8N-SB-4.0-5.0 *Collected:* 5/27/2011 9:10:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.116	J	0.0677	MDL	0.226	PQL	mg/Kg	J	Z, Q, Q
LEAD	10.6		0.0117	MDL	0.226	PQL	mg/Kg	J	Q
SILVER	0.0394	J	0.0135	MDL	0.113	PQL	mg/Kg	J	Z

Sample ID: SL-003-SA8N-SB-9.0-10.0 *Collected:* 5/27/2011 9:30:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.842		0.0194	MDL	0.121	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: PrepDE167_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-003-SA8N-SB-9.0-10.0 *Collected:* 5/27/2011 9:30:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.137	J	0.0485	MDL	0.485	PQL	mg/Kg	J	Z

Sample ID: SL-003-SA8N-SB-9.0-10.0 *Collected:* 5/27/2011 9:30:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0916	J	0.0727	MDL	0.242	PQL	mg/Kg	J	Z, Q, Q
LEAD	9.79		0.0126	MDL	0.242	PQL	mg/Kg	J	Q
SILVER	0.0602	J	0.0145	MDL	0.121	PQL	mg/Kg	J	Z

Sample ID: SL-071-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 8:25:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.712		0.0171	MDL	0.107	PQL	mg/Kg	J	Q

Sample ID: SL-071-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 8:25:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.177	J	0.0427	MDL	0.427	PQL	mg/Kg	J	Z

Sample ID: SL-071-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 8:25:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.136	J	0.0640	MDL	0.213	PQL	mg/Kg	J	Z, Q, Q
LEAD	11.1		0.0111	MDL	0.213	PQL	mg/Kg	J	Q
SILVER	0.0305	J	0.0128	MDL	0.107	PQL	mg/Kg	J	Z

Sample ID: SL-091-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 9:05:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.869		0.0170	MDL	0.106	PQL	mg/Kg	J	Q

Sample ID: SL-091-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 9:05:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.161	J	0.0424	MDL	0.424	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE167 **Laboratory:** LL

EDD Filename: PrepDE167_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-091-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 9:05:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.171	J	0.0637	MDL	0.212	PQL	mg/Kg	J	Z, Q, Q
LEAD	12.3		0.0110	MDL	0.212	PQL	mg/Kg	J	Q
SILVER	0.0521	J	0.0127	MDL	0.106	PQL	mg/Kg	J	Z

Sample ID: SL-092-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 9:45:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.926		0.0179	MDL	0.112	PQL	mg/Kg	J	Q

Sample ID: SL-092-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 9:45:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.171	J	0.0447	MDL	0.447	PQL	mg/Kg	J	Z

Sample ID: SL-092-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 9:45:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0839	J	0.0670	MDL	0.223	PQL	mg/Kg	J	Z, Q, Q
LEAD	12.1		0.0116	MDL	0.223	PQL	mg/Kg	J	Q
SILVER	0.0519	J	0.0134	MDL	0.112	PQL	mg/Kg	J	Z

Sample ID: SL-093-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 10:05:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.866		0.0170	MDL	0.106	PQL	mg/Kg	J	Q

Sample ID: SL-093-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 10:05:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.214	J	0.0424	MDL	0.424	PQL	mg/Kg	J	Z

Sample ID: SL-093-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 10:05:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.126	J	0.0637	MDL	0.212	PQL	mg/Kg	J	Z, Q, Q
LEAD	12.7		0.0110	MDL	0.212	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE167 **Laboratory:** LL

EDD Filename: PrepDE167_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-093-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 10:05:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0473	J	0.0127	MDL	0.106	PQL	mg/Kg	J	Z

Sample ID: SL-117-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 10:45:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.889		0.0173	MDL	0.108	PQL	mg/Kg	J	Q

Sample ID: SL-117-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 10:45:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.195	J	0.0433	MDL	0.433	PQL	mg/Kg	J	Z

Sample ID: SL-117-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 10:45:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.135	J	0.0650	MDL	0.217	PQL	mg/Kg	J	Z, Q, Q
LEAD	12.6		0.0113	MDL	0.217	PQL	mg/Kg	J	Q
SILVER	0.0643	J	0.0130	MDL	0.108	PQL	mg/Kg	J	Z

Sample ID: SL-118-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 11:05:00 ***Analysis Type:*** REA ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.808		0.0173	MDL	0.108	PQL	mg/Kg	J	Q

Sample ID: SL-118-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 11:05:00 ***Analysis Type:*** REA2 ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.185	J	0.0431	MDL	0.431	PQL	mg/Kg	J	Z

Sample ID: SL-118-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 11:05:00 ***Analysis Type:*** RES ***Dilution:*** 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.112	J	0.0647	MDL	0.216	PQL	mg/Kg	J	Z, Q, Q
LEAD	9.91		0.0112	MDL	0.216	PQL	mg/Kg	J	Q
SILVER	0.0376	J	0.0129	MDL	0.108	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE167 Laboratory: LL

EDD Filename: PrepDE167_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-119-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:45:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.886		0.0172	MDL	0.108	PQL	mg/Kg	J	Q

Sample ID: SL-119-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:45:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.184	J	0.0431	MDL	0.431	PQL	mg/Kg	J	Z

Sample ID: SL-119-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:45:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.123	J	0.0646	MDL	0.215	PQL	mg/Kg	J	Z, Q, Q
LEAD	12.5		0.0112	MDL	0.215	PQL	mg/Kg	J	Q
SILVER	0.0569	J	0.0129	MDL	0.108	PQL	mg/Kg	J	Z

Sample ID: SL-120-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:25:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.803		0.0176	MDL	0.110	PQL	mg/Kg	J	Q

Sample ID: SL-120-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:25:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.156	J	0.0440	MDL	0.440	PQL	mg/Kg	J	Z

Sample ID: SL-120-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:25:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.136	J	0.0659	MDL	0.220	PQL	mg/Kg	J	Z, Q, Q
LEAD	16.4		0.0114	MDL	0.220	PQL	mg/Kg	J	Q

Sample ID: SL-122-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 9:25:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	1.07		0.0182	MDL	0.114	PQL	mg/Kg	J	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: PrepDE167_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-122-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 9:25:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.213	J	0.0455	MDL	0.455	PQL	mg/Kg	J	Z

Sample ID: SL-122-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 9:25:00 *Analysis Type:* RES *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.130	J	0.0682	MDL	0.227	PQL	mg/Kg	J	Z, Q, Q
LEAD	14.4		0.0118	MDL	0.227	PQL	mg/Kg	J	Q
SILVER	0.0558	J	0.0136	MDL	0.114	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7199 **Matrix: SO**

Sample ID: DUP09-SA5DN-QC-052711 *Collected:* 5/27/2011 10:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.78	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z, FD

Sample ID: SL-003-SA8N-SB-4.0-5.0 *Collected:* 5/27/2011 9:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.31	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-003-SA8N-SB-9.0-10.0 *Collected:* 5/27/2011 9:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.40	J	0.25	MDL	1.2	PQL	mg/Kg	J	Z

Sample ID: SL-071-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 8:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.77	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE167 **Laboratory:** LL

EDD Filename: PrepDE167_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7199 **Matrix:** SO

Sample ID: SL-091-SA5DN-SS-0.0-0.5 **Collected:** 5/27/2011 9:05:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.59	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-093-SA5DN-SS-0.0-0.5 **Collected:** 5/27/2011 10:05:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.95	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-117-SA5DN-SS-0.0-0.5 **Collected:** 5/27/2011 10:45:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	1.5		0.22	MDL	1.1	PQL	mg/Kg	J	FD

Sample ID: SL-118-SA5DN-SS-0.0-0.5 **Collected:** 5/27/2011 11:05:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	1.0	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-119-SA5DN-SS-0.0-0.5 **Collected:** 5/27/2011 11:45:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	1.0	J	0.22	MDL	1.1	PQL	mg/Kg	J	Z

Sample ID: SL-122-SA5DN-SS-0.0-0.5 **Collected:** 5/27/2011 9:25:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
HEXAVALENT CHROMIUM	0.72	J	0.24	MDL	1.2	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 7471A **Matrix:** SO

Sample ID: DUP09-SA5DN-QC-052711 **Collected:** 5/27/2011 10:55:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0407	J	0.0030	MDL	0.106	PQL	mg/Kg	J	Z, E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE167 Laboratory: LL

EDD Filename: PrepDE167_v1 eQAPP Name: CDM_SSFL_110509

Method Category: METALS

Method: 7471A **Matrix:** SO

Sample ID: SL-003-SA8N-SB-4.0-5.0 *Collected:* 5/27/2011 9:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0032	U	0.0032	MDL	0.112	PQL	mg/Kg	UJ	E

Sample ID: SL-003-SA8N-SB-9.0-10.0 *Collected:* 5/27/2011 9:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0034	U	0.0034	MDL	0.120	PQL	mg/Kg	UJ	E

Sample ID: SL-071-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 8:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0036	J	0.0031	MDL	0.109	PQL	mg/Kg	J	Z, E

Sample ID: SL-091-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 9:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0351	J	0.0030	MDL	0.105	PQL	mg/Kg	J	Z, E

Sample ID: SL-092-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 9:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0048	J	0.0030	MDL	0.106	PQL	mg/Kg	J	Z, E

Sample ID: SL-093-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 10:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0127	J	0.0031	MDL	0.107	PQL	mg/Kg	J	Z, E

Sample ID: SL-117-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 10:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0644	J	0.0030	MDL	0.104	PQL	mg/Kg	J	Z, E

Sample ID: SL-118-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0247	J	0.0031	MDL	0.110	PQL	mg/Kg	J	Z, E

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE167 **Laboratory:** LL

EDD Filename: PrepDE167_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: METALS

Method: 7471A **Matrix:** SO

Sample ID: SL-119-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0644	J	0.0031	MDL	0.107	PQL	mg/Kg	J	Z, E

Sample ID: SL-120-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.461		0.0030	MDL	0.104	PQL	mg/Kg	J	E

Method Category: SVOA

Method: 1625C **Matrix:** SO

Sample ID: SL-119-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	252	J	184	MDL	368	PQL	ng/Kg	J	Z

Sample ID: SL-120-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	320	J	183	MDL	366	PQL	ng/Kg	J	Z

Method Category: SVOA

Method: 8015M **Matrix:** SO

Sample ID: DUP09-SA5DN-QC-052711 *Collected:* 5/27/2011 10:55:00 *Analysis Type:* REA3 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	30		0.88	MDL	2.7	PQL	mg/Kg	J	FD
EFH (C30-C40)	72		0.88	MDL	2.7	PQL	mg/Kg	J	FD

Sample ID: SL-117-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 10:45:00 *Analysis Type:* REA *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIETHYLENE GLYCOL	5.5	U	5.5	MDL	11	PQL	mg/Kg	UJ	Q
ETHYLENE GLYCOL	5.5	U	5.5	MDL	11	PQL	mg/Kg	UJ	Q
Propylene glycol	5.5	U	5.5	MDL	11	PQL	mg/Kg	UJ	Q

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: PrepDE167_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8015M **Matrix: SO**

Sample ID: SL-117-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 10:45:00 *Analysis Type:* REA3 *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C21-C30)	67		2.2	MDL	6.6	PQL	mg/Kg	J	FD
EFH (C30-C40)	210		2.2	MDL	6.6	PQL	mg/Kg	J	FD

Sample ID: SL-119-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:45:00 *Analysis Type:* REA3 *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH (C15-C20)	12	J	4.4	MDL	13	PQL	mg/Kg	J	Z

Method Category: SVOA

Method: 8081A **Matrix: SO**

Sample ID: DUP09-SA5DN-QC-052711 *Collected:* 5/27/2011 10:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDD	0.073	U	0.073	MDL	0.38	PQL	ug/Kg	UJ	S
4,4'-DDE	0.47		0.073	MDL	0.38	PQL	ug/Kg	J	S
4,4'-DDT	0.97		0.073	MDL	0.38	PQL	ug/Kg	J	S
ALDRIN	0.073	U	0.073	MDL	0.18	PQL	ug/Kg	UJ	S
ALPHA-BHC	0.038	U	0.038	MDL	0.18	PQL	ug/Kg	UJ	S
BETA-BHC	0.066	U	0.066	MDL	0.18	PQL	ug/Kg	UJ	S
Chlordane	2.1	J	0.88	MDL	3.8	PQL	ug/Kg	J	Z, S
DELTA-BHC	0.040	U	0.040	MDL	0.18	PQL	ug/Kg	UJ	S
DIELDRIN	0.14	U	0.14	MDL	0.38	PQL	ug/Kg	UJ	S
ENDOSULFAN I	0.049	U	0.049	MDL	0.18	PQL	ug/Kg	UJ	S
ENDOSULFAN II	0.090	U	0.090	MDL	0.38	PQL	ug/Kg	UJ	S
ENDOSULFAN SULFATE	0.073	U	0.073	MDL	0.38	PQL	ug/Kg	UJ	S
ENDRIN	0.073	U	0.073	MDL	0.38	PQL	ug/Kg	UJ	S
ENDRIN ALDEHYDE	0.073	U	0.073	MDL	0.38	PQL	ug/Kg	UJ	S
ENDRIN KETONE	0.073	U	0.073	MDL	0.38	PQL	ug/Kg	UJ	S
gamma-BHC (Lindane)	0.038	U	0.038	MDL	0.18	PQL	ug/Kg	UJ	S
HEPTACHLOR	0.066	U	0.066	MDL	0.18	PQL	ug/Kg	UJ	S
HEPTACHLOR EPOXIDE	0.061	U	0.061	MDL	0.18	PQL	ug/Kg	UJ	S, FD
METHOXYCHLOR	0.38	U	0.38	MDL	1.8	PQL	ug/Kg	UJ	S
MIREX	0.26	J	0.073	MDL	0.38	PQL	ug/Kg	J	Z, S, FD

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE167 Laboratory: LL

EDD Filename: PrepDE167_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 8081A **Matrix:** SO

Sample ID: DUP09-SA5DN-QC-052711 *Collected:* 5/27/2011 10:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOXAPHENE	2.4	U	2.4	MDL	7.3	PQL	ug/Kg	UJ	S

Sample ID: SL-071-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 8:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ENDRIN KETONE	0.23	J	0.073	MDL	0.37	PQL	ug/Kg	J	Z

Sample ID: SL-091-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 9:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlordane	2.3	J	0.87	MDL	3.7	PQL	ug/Kg	J	Z
HEPTACHLOR EPOXIDE	0.050	J	0.037	MDL	0.18	PQL	ug/Kg	J	Z

Sample ID: SL-092-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 9:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlordane	2.7	J	0.89	MDL	3.8	PQL	ug/Kg	J	Z
ENDOSULFAN SULFATE	0.27	J	0.074	MDL	0.38	PQL	ug/Kg	J	Z

Sample ID: SL-093-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 10:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlordane	2.4	J	0.87	MDL	3.7	PQL	ug/Kg	J	Z

Sample ID: SL-117-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 10:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.52		0.073	MDL	0.38	PQL	ug/Kg	J	S
4,4'-DDT	1.1		0.073	MDL	0.38	PQL	ug/Kg	J	S
Chlordane	2.3	J	0.88	MDL	3.8	PQL	ug/Kg	J	Z, S
HEPTACHLOR EPOXIDE	0.095	J	0.038	MDL	0.18	PQL	ug/Kg	J	Z, S, FD
MIREX	0.073	U	0.073	MDL	0.38	PQL	ug/Kg	UJ	FD

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE167 Laboratory: LL

EDD Filename: PrepDE167_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 8081A **Matrix:** SO

Sample ID: SL-118-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDD	0.076	J	0.073	MDL	0.37	PQL	ug/Kg	J	Z
4,4'-DDE	0.19	J	0.073	MDL	0.37	PQL	ug/Kg	J	Z
4,4'-DDT	0.16	J	0.073	MDL	0.37	PQL	ug/Kg	J	Z
MIREX	0.31	J	0.073	MDL	0.37	PQL	ug/Kg	J	Z

Sample ID: SL-119-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.31	J	0.073	MDL	0.38	PQL	ug/Kg	J	Z, S
4,4'-DDT	1.4		0.073	MDL	0.38	PQL	ug/Kg	J	S
Chlordane	5.6		0.89	MDL	3.8	PQL	ug/Kg	J	S
DELTA-BHC	0.086	J	0.040	MDL	0.18	PQL	ug/Kg	J	Z, S

Sample ID: SL-120-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDD	0.073	U	0.073	MDL	0.37	PQL	ug/Kg	UJ	S
4,4'-DDE	0.39		0.073	MDL	0.37	PQL	ug/Kg	J	S
4,4'-DDT	1.4		0.073	MDL	0.37	PQL	ug/Kg	J	S
ALDRIN	0.073	U	0.073	MDL	0.18	PQL	ug/Kg	UJ	S
ALPHA-BHC	0.037	U	0.037	MDL	0.18	PQL	ug/Kg	UJ	S
BETA-BHC	0.066	U	0.066	MDL	0.18	PQL	ug/Kg	UJ	S
Chlordane	9.3		0.88	MDL	3.7	PQL	ug/Kg	J	S
DELTA-BHC	0.040	U	0.040	MDL	0.18	PQL	ug/Kg	UJ	S
DIELDRIN	2.9	U	2.9	MDL	2.9	PQL	ug/Kg	UJ	S
ENDOSULFAN I	0.048	U	0.048	MDL	0.18	PQL	ug/Kg	UJ	S
ENDOSULFAN II	0.19	U	0.19	MDL	0.37	PQL	ug/Kg	UJ	S
ENDOSULFAN SULFATE	0.073	U	0.073	MDL	0.37	PQL	ug/Kg	UJ	S
ENDRIN	0.073	U	0.073	MDL	0.37	PQL	ug/Kg	UJ	S
ENDRIN ALDEHYDE	0.073	U	0.073	MDL	0.37	PQL	ug/Kg	UJ	S
ENDRIN KETONE	0.12	U	0.12	MDL	0.37	PQL	ug/Kg	UJ	S
gamma-BHC (Lindane)	0.037	U	0.037	MDL	0.18	PQL	ug/Kg	UJ	S
HEPTACHLOR	0.066	U	0.066	MDL	0.18	PQL	ug/Kg	UJ	S
HEPTACHLOR EPOXIDE	0.19	U	0.19	MDL	0.19	PQL	ug/Kg	UJ	S
METHOXYCHLOR	0.37	U	0.37	MDL	1.8	PQL	ug/Kg	UJ	S

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE167 Laboratory: LL

EDD Filename: PrepDE167_v1 eQAPP Name: CDM_SSFL_110509

Method Category: SVOA

Method: 8081A Matrix: SO

Sample ID: SL-120-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MIREX	0.073	U	0.073	MDL	0.37	PQL	ug/Kg	UJ	S
TOXAPHENE	2.4	U	2.4	MDL	7.3	PQL	ug/Kg	UJ	S

Sample ID: SL-122-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 9:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.50		0.078	MDL	0.40	PQL	ug/Kg	J	S
4,4'-DDT	1.3		0.078	MDL	0.40	PQL	ug/Kg	J	S
Chlordane	3.0	J	0.95	MDL	4.0	PQL	ug/Kg	J	Z, S

Method Category: SVOA

Method: 8082 Matrix: SO

Sample ID: DUP09-SA5DN-QC-052711 *Collected:* 5/27/2011 10:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	5.0		1.1	MDL	3.6	PQL	ug/Kg	J	FD

Sample ID: SL-071-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 8:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	1.6	J	1.1	MDL	3.6	PQL	ug/Kg	J	Z

Sample ID: SL-093-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 10:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	1.9	J	1.1	MDL	3.6	PQL	ug/Kg	J	Z

Sample ID: SL-117-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 10:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	1.9	J	1.1	MDL	3.6	PQL	ug/Kg	J	Z, FD

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE167 **Laboratory:** LL

EDD Filename: PrepDE167_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8082 **Matrix:** SO

Sample ID: SL-119-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	1.7	J	0.43	MDL	1.9	PQL	ug/Kg	J	Z
Aroclor 5460	2.1	J	1.1	MDL	3.6	PQL	ug/Kg	J	Z

Sample ID: SL-120-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:25:00 *Analysis Type:* RES *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	12	J	5.5	MDL	18	PQL	ug/Kg	J	Z

Sample ID: SL-122-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 9:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	1.9	J	0.46	MDL	2.0	PQL	ug/Kg	J	Z

Method Category: SVOA

Method: 8151A **Matrix:** SO

Sample ID: DUP09-SA5DN-QC-052711 *Collected:* 5/27/2011 10:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MCPA	400		83	MDL	270	PQL	ug/Kg	J	FD

Sample ID: SL-091-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 9:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4,5-TP (Silvex)	0.10	J	0.082	MDL	0.19	PQL	ug/Kg	J	Z

Sample ID: SL-092-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 9:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4,5-TP (Silvex)	0.16	J	0.083	MDL	0.19	PQL	ug/Kg	J	Z

Sample ID: SL-093-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 10:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4,5-TP (Silvex)	0.15	J	0.082	MDL	0.18	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: PrepDE167_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8151A **Matrix: SO**

Sample ID: SL-117-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 10:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MCPA	490	U	490	MDL	490	PQL	ug/Kg	UJ	FD

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: DUP09-SA5DN-QC-052711 *Collected:* 5/27/2011 10:55:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	370	U	370	MDL	1100	PQL	ug/Kg	UJ	L

Sample ID: SL-003-SA8N-SB-4.0-5.0 *Collected:* 5/27/2011 9:10:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	390	U	390	MDL	1200	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	25	J	20	MDL	390	PQL	ug/Kg	J	Z

Sample ID: SL-003-SA8N-SB-9.0-10.0 *Collected:* 5/27/2011 9:30:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	410	U	410	MDL	1200	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	23	J	20	MDL	410	PQL	ug/Kg	J	Z

Sample ID: SL-071-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 8:25:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	360	U	360	MDL	1100	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	43	J	18	MDL	360	PQL	ug/Kg	J	Z

Sample ID: SL-091-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 9:05:00 *Analysis Type:* RES-ACID *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	360	U	360	MDL	1100	PQL	ug/Kg	UJ	L
BENZO(A)ANTHRACENE	56	J	18	MDL	180	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	58	J	18	MDL	180	PQL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	68	J	18	MDL	180	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: PrepDE167_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C **Matrix: SO**

Sample ID: SL-091-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 9:05:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(K)FLUORANTHENE	27	J	18	MDL	180	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	43	J	18	MDL	360	PQL	ug/Kg	J	Z
Butylbenzylphthalate	24	J	18	MDL	180	PQL	ug/Kg	J	Z
CHRYSENE	78	J	18	MDL	180	PQL	ug/Kg	J	Z
FLUORANTHENE	120	J	18	MDL	180	PQL	ug/Kg	J	Z
PHENANTHRENE	76	J	18	MDL	180	PQL	ug/Kg	J	Z
PYRENE	130	J	18	MDL	180	PQL	ug/Kg	J	Z

Sample ID: SL-092-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 9:45:00 ***Analysis Type:*** RES-ACID ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	370	U	370	MDL	1100	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	40	J	18	MDL	370	PQL	ug/Kg	J	Z

Sample ID: SL-093-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 10:05:00 ***Analysis Type:*** RES-ACID ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	360	U	360	MDL	1100	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	33	J	18	MDL	360	PQL	ug/Kg	J	Z

Sample ID: SL-117-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 10:45:00 ***Analysis Type:*** RES-ACID ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	370	U	370	MDL	1100	PQL	ug/Kg	UJ	L
BENZIDINE	1300	U	1300	MDL	3700	PQL	ug/Kg	R	Q
BIS(2-ETHYLHEXYL)PHTHALATE	51	J	18	MDL	370	PQL	ug/Kg	J	Z
CHRYSENE	130	J	18	MDL	180	PQL	ug/Kg	J	Z

Sample ID: SL-118-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 11:05:00 ***Analysis Type:*** RES-ACID ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	360	U	360	MDL	1100	PQL	ug/Kg	UJ	L
BENZO(A)ANTHRACENE	23	J	18	MDL	180	PQL	ug/Kg	J	Z
BENZO(A)PYRENE	25	J	18	MDL	180	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	35	J	18	MDL	360	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE167 **Laboratory:** LL

EDD Filename: PrepDE167_v1 **eQAPP Name:** CDM_SSFL_110509

Method Category: SVOA

Method: 8270C **Matrix:** SO

Sample ID: SL-118-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 11:05:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORANTHENE	40	J	18	MDL	180	PQL	ug/Kg	J	Z
PHENANTHRENE	24	J	18	MDL	180	PQL	ug/Kg	J	Z
PYRENE	41	J	18	MDL	180	PQL	ug/Kg	J	Z

Sample ID: SL-119-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 11:45:00 ***Analysis Type:*** RES-ACID ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	370	U	370	MDL	1100	PQL	ug/Kg	UJ	L
BIS(2-ETHYLHEXYL)PHTHALATE	38	J	18	MDL	370	PQL	ug/Kg	J	Z

Sample ID: SL-120-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 11:25:00 ***Analysis Type:*** RES-ACID ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	370	U	370	MDL	1100	PQL	ug/Kg	UJ	L
BENZO(A)PYRENE	26	J	18	MDL	180	PQL	ug/Kg	J	Z
CHRYSENE	130	J	18	MDL	180	PQL	ug/Kg	J	Z
Di-n-butylphthalate	66	J	18	MDL	180	PQL	ug/Kg	J	Z
FLUORANTHENE	48	J	18	MDL	180	PQL	ug/Kg	J	Z
PHENANTHRENE	41	J	18	MDL	180	PQL	ug/Kg	J	Z
PYRENE	46	J	18	MDL	180	PQL	ug/Kg	J	Z

Sample ID: SL-122-SA5DN-SS-0.0-0.5 ***Collected:*** 5/27/2011 9:25:00 ***Analysis Type:*** RES-ACID ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,4-DINITROPHENOL	390	U	390	MDL	1200	PQL	ug/Kg	UJ	L
ANTHRACENE	43	J	20	MDL	200	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	140	J	20	MDL	200	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	170	J	20	MDL	200	PQL	ug/Kg	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	48	J	20	MDL	390	PQL	ug/Kg	J	Z
CARBAZOLE	28	J	20	MDL	200	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	43	J	20	MDL	200	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	180	J	20	MDL	200	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: PrepDE167_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: DUP09-SA5DN-QC-052711 *Collected:* 5/27/2011 10:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	5.0	J	1.8	MDL	9.2	PQL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	47		3.7	MDL	9.2	PQL	ug/Kg	J	FD
BENZO(A)PYRENE	40		3.7	MDL	9.2	PQL	ug/Kg	J	FD
BENZO(B)FLUORANTHENE	67		3.7	MDL	9.2	PQL	ug/Kg	J	FD
BENZO(G,H,I)PERYLENE	13		3.7	MDL	9.2	PQL	ug/Kg	J	FD
BENZO(K)FLUORANTHENE	36		3.7	MDL	9.2	PQL	ug/Kg	J	FD
BIS(2-ETHYLHEXYL)PHTHALATE	68	J	33	MDL	99	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	5.3	J	3.7	MDL	9.2	PQL	ug/Kg	J	Z, FD
FLUORANTHENE	96		3.7	MDL	9.2	PQL	ug/Kg	J	FD
INDENO(1,2,3-CD)PYRENE	14		3.7	MDL	9.2	PQL	ug/Kg	J	FD
PHENANTHRENE	25		3.7	MDL	9.2	PQL	ug/Kg	J	FD
PYRENE	76		3.7	MDL	9.2	PQL	ug/Kg	J	FD

Sample ID: SL-071-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 8:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	5.1	J	3.7	MDL	9.2	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	8.7	J	3.7	MDL	9.2	PQL	ug/Kg	J	Z
CHRYSENE	2.7	J	1.8	MDL	9.2	PQL	ug/Kg	J	Z

Sample ID: SL-091-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 9:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	3.5	J	1.8	MDL	9.0	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	3.8	J	3.6	MDL	9.0	PQL	ug/Kg	J	Z

Sample ID: SL-092-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 9:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	7.5	J	3.7	MDL	9.3	PQL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	8.0	J	3.7	MDL	9.3	PQL	ug/Kg	J	Z
FLUORENE	6.0	J	3.7	MDL	9.3	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: PrepDE167_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-093-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 10:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	4.9	J	3.6	MDL	9.0	PQL	ug/Kg	J	Z
CHRYSENE	5.6	J	1.8	MDL	9.0	PQL	ug/Kg	J	Z
FLUORANTHENE	7.8	J	3.6	MDL	9.0	PQL	ug/Kg	J	Z
PHENANTHRENE	4.8	J	3.6	MDL	9.0	PQL	ug/Kg	J	Z
PYRENE	7.0	J	3.6	MDL	9.0	PQL	ug/Kg	J	Z

Sample ID: SL-117-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 10:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	4.5	J	1.8	MDL	9.2	PQL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	6.7	J	3.7	MDL	9.2	PQL	ug/Kg	J	Z, FD
BENZO(A)PYRENE	7.2	J	3.7	MDL	9.2	PQL	ug/Kg	J	Z, FD
BENZO(B)FLUORANTHENE	13		3.7	MDL	9.2	PQL	ug/Kg	J	FD
BENZO(G,H,I)PERYLENE	7.6	J	3.7	MDL	9.2	PQL	ug/Kg	J	Z, FD
BENZO(K)FLUORANTHENE	6.0	J	3.7	MDL	9.2	PQL	ug/Kg	J	Z, FD
DIBENZO(A,H)ANTHRACENE	3.7	U	3.7	MDL	9.2	PQL	ug/Kg	UJ	FD
FLUORANTHENE	10		3.7	MDL	9.2	PQL	ug/Kg	J	FD
INDENO(1,2,3-CD)PYRENE	3.9	J	3.7	MDL	9.2	PQL	ug/Kg	J	Z, FD
PHENANTHRENE	4.8	J	3.7	MDL	9.2	PQL	ug/Kg	J	Z, FD
PYRENE	13		3.7	MDL	9.2	PQL	ug/Kg	J	FD

Sample ID: SL-118-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	1.6	J	0.37	MDL	1.8	PQL	ug/Kg	J	Z

Sample ID: SL-120-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:25:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	3.5	J	1.8	MDL	9.0	PQL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	7.5	J	3.6	MDL	9.0	PQL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	7.7	J	3.6	MDL	9.0	PQL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	3.7	J	3.6	MDL	9.0	PQL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE167 Laboratory: LL

EDD Filename: PrepDE167_v1 eQAPP Name: CDM_SSFL_110509

Method Category: VOA

Method: 8015B **Matrix:** SO

Sample ID: DUP09-SA5DN-QC-052711 *Collected:* 5/27/2011 10:55:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
p-Terphenyl	1.7	J	1.7	MDL	3.9	PQL	mg/Kg	J	Z

Sample ID: SL-117-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 10:45:00 *Analysis Type:* REA2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
p-Terphenyl	2.2	J	1.7	MDL	3.9	PQL	mg/Kg	J	Z, Q, Q

Sample ID: SL-119-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:45:00 *Analysis Type:* REA2 *Dilution:* 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
p-Terphenyl	12	J	8.3	MDL	19	PQL	mg/Kg	J	Z

Sample ID: SL-120-SA5DN-SS-0.0-0.5 *Collected:* 5/27/2011 11:25:00 *Analysis Type:* REA2 *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
p-Terphenyl	6.6	J	3.3	MDL	7.7	PQL	mg/Kg	J	Z

Method Category: VOA

Method: 8260B **Matrix:** AQ

Sample ID: TB-052711 *Collected:* 5/27/2011 8:00:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZENE	1	J	0.5	MDL	5	PQL	ug/L	J	Z
TOLUENE	0.7	J	0.7	MDL	5	PQL	ug/L	J	Z

Method Category: VOA

Method: 8260B **Matrix:** SO

Sample ID: SL-003-SA8N-SB-4.0-5.0 *Collected:* 5/27/2011 9:10:00 *Analysis Type:* RES *Dilution:* 0.94

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	11		7.4	MDL	8.9	PQL	ug/Kg	U	B
METHYLENE CHLORIDE	1.1	J	0.27	MDL	4.4	PQL	ug/Kg	U	B

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE167

Laboratory: LL

EDD Filename: PrepDE167_v1

eQAPP Name: CDM_SSFL_110509

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: PrepDE167_v1 **eQAPP Name: CDM_SSFL_110509**

Reason Code Legend

Reason Code	*Description*
	Duplicate Sample Count = 0
	Duplicate Sample Count > 1
	Illogical Fraction
	Laboratory Control Sample Count = 0
	Laboratory Control Sample Count > 1
	Matrix Spike Sample Count = 0
	Matrix Spike Sample Count > 1
	Method Blank Sample Count = 0
	Method Blank Sample Count > 1
	Percent Moisture
*#	Professional Judgment
A	ICP Serial Dilution
B	Calibration Blank Contamination
B	Method Blank Contamination
C	Continuing Calibration Verification Correlation Coefficient
C	Continuing Calibration Verification Percent Difference Lower Estimation
C	Continuing Calibration Verification Percent Difference Lower Rejection
C	Continuing Calibration Verification Percent Difference Upper Estimation
C	Continuing Calibration Verification Percent Difference Upper Rejection
C	Initial Calibration Correlation Coefficient
C	Initial Calibration Percent Relative Standard Deviation
C	Initial Calibration Verification Correlation Coefficient
C	Initial Calibration Verification Percent Difference Lower Estimation
C	Initial Calibration Verification Percent Difference Lower Rejection
C	Initial Calibration Verification Percent Difference Upper Estimation
C	Initial Calibration Verification Percent Difference Upper Rejection
E	Laboratory Control Precision
E	Laboratory Duplicate Precision
E	Matrix Spike Precision
F	Equipment Blank Contamination

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: PrepDE167_v1 **eQAPP Name: CDM_SSFL_110509**

F	Field Blank Contamination
FD	Field Duplicate Precision
FT	Field Triplicate Precision
H	Extraction to Analysis Estimation
H	Extraction to Analysis Rejection
H	Preservation
H	Sampling to Analysis Estimation
H	Sampling to Analysis Rejection
H	Sampling to Extraction Estimation
H	Sampling to Extraction Rejection
H	Sampling to Leaching Estimation
H	Sampling to Leaching Rejection
H	Temperature Estimation
H	Temperature Rejection
I	Internal Standard Estimation
I	Internal Standard Rejection
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
L	Laboratory Control Spike Lower Rejection
L	Laboratory Control Spike Upper Estimation
L	Laboratory Control Spike Upper Rejection
M	Continuing Tune
M	Initial Tune
M	Performance Evaluation Mixture
M	Resolution Check Mixture
Q	Laboratory Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
Q	Matrix Spike Upper Rejection
R	Continuing Calibration Verification Percent Recovery Lower Estimation

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: PrepDE167_v1 **eQAPP Name: CDM_SSFL_110509**

R	Continuing Calibration Verification Percent Recovery Lower Rejection
R	Continuing Calibration Verification Percent Recovery Upper Estimation
R	Continuing Calibration Verification Percent Recovery Upper Rejection
R	Continuing Calibration Verification Relative Response Factor
R	Initial Calibration Relative Response Factor
R	Initial Calibration Verification Percent Recovery Lower Estimation
R	Initial Calibration Verification Percent Recovery Lower Rejection
R	Initial Calibration Verification Percent Recovery Upper Estimation
R	Initial Calibration Verification Percent Recovery Upper Rejection
R	Initial Calibration Verification Relative Response Factor
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Lower Rejection
S	Surrogate/Tracer Recovery Upper Estimation
S	Surrogate/Tracer Recovery Upper Rejection
T	Trip Blank Contamination
Z	Reporting Limit
Z	Reporting Limit > Project Maximum Contamination Limit
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

DE167

Method Blank Outlier Report

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: DE167_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **6010B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P15708DB221712	6/7/2011 5:12:00 PM	CALCIUM PHOSPHORUS TIN	6.72 mg/Kg 1.29 mg/Kg 1.55 mg/Kg	DUP09-SA5DN-QC-052711 SL-003-SA8N-SB-4.0-5.0 SL-003-SA8N-SB-9.0-10.0 SL-071-SA5DN-SS-0.0-0.5 SL-091-SA5DN-SS-0.0-0.5 SL-092-SA5DN-SS-0.0-0.5 SL-093-SA5DN-SS-0.0-0.5 SL-117-SA5DN-SS-0.0-0.5 SL-118-SA5DN-SS-0.0-0.5 SL-119-SA5DN-SS-0.0-0.5 SL-120-SA5DN-SS-0.0-0.5 SL-122-SA5DN-SS-0.0-0.5

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
DUP09-SA5DN-QC-052711(RES)	TIN	2.59 mg/Kg	2.59U mg/Kg
SL-003-SA8N-SB-4.0-5.0(RES)	TIN	2.76 mg/Kg	2.76U mg/Kg
SL-003-SA8N-SB-9.0-10.0(RES)	TIN	2.67 mg/Kg	2.67U mg/Kg
SL-071-SA5DN-SS-0.0-0.5(RES)	TIN	2.56 mg/Kg	2.56U mg/Kg
SL-091-SA5DN-SS-0.0-0.5(RES)	TIN	2.72 mg/Kg	2.72U mg/Kg
SL-092-SA5DN-SS-0.0-0.5(RES)	TIN	2.66 mg/Kg	2.66U mg/Kg
SL-093-SA5DN-SS-0.0-0.5(RES)	TIN	2.64 mg/Kg	2.64U mg/Kg
SL-117-SA5DN-SS-0.0-0.5(RES)	TIN	2.75 mg/Kg	2.75U mg/Kg
SL-118-SA5DN-SS-0.0-0.5(RES)	TIN	2.65 mg/Kg	2.65U mg/Kg
SL-119-SA5DN-SS-0.0-0.5(RES)	TIN	2.59 mg/Kg	2.59U mg/Kg
SL-120-SA5DN-SS-0.0-0.5(RES)	TIN	2.79 mg/Kg	2.79U mg/Kg
SL-122-SA5DN-SS-0.0-0.5(RES)	TIN	3.07 mg/Kg	3.07U mg/Kg

Method: **6020**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P15726HB222324A	6/10/2011 11:24:00 PM	LEAD	0.0194 mg/Kg	DUP09-SA5DN-QC-052711 SL-003-SA8N-SB-4.0-5.0 SL-003-SA8N-SB-9.0-10.0 SL-071-SA5DN-SS-0.0-0.5 SL-091-SA5DN-SS-0.0-0.5 SL-092-SA5DN-SS-0.0-0.5 SL-093-SA5DN-SS-0.0-0.5 SL-117-SA5DN-SS-0.0-0.5 SL-118-SA5DN-SS-0.0-0.5 SL-119-SA5DN-SS-0.0-0.5 SL-120-SA5DN-SS-0.0-0.5 SL-122-SA5DN-SS-0.0-0.5

Method Blank Outlier Report

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: DE167_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8015M**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P57571AB322158A	6/7/2011 9:58:00 PM	EFH (C8-C11)	0.40 mg/Kg	DUP09-SA5DN-QC-052711 SL-117-SA5DN-SS-0.0-0.5 SL-118-SA5DN-SS-0.0-0.5 SL-119-SA5DN-SS-0.0-0.5 SL-120-SA5DN-SS-0.0-0.5

Method: **8151A**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P57576AB240515A	6/9/2011 5:15:00 AM	MCPP	84 ug/Kg	DUP09-SA5DN-QC-052711 SL-071-SA5DN-SS-0.0-0.5 SL-091-SA5DN-SS-0.0-0.5 SL-092-SA5DN-SS-0.0-0.5 SL-093-SA5DN-SS-0.0-0.5 SL-117-SA5DN-SS-0.0-0.5 SL-118-SA5DN-SS-0.0-0.5 SL-119-SA5DN-SS-0.0-0.5 SL-120-SA5DN-SS-0.0-0.5 SL-122-SA5DN-SS-0.0-0.5

Method: **8260B**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
VBLKB72B211210A	6/1/2011 12:10:00 PM	ACETONE METHYLENE CHLORIDE	8.6 ug/Kg 1.4 ug/Kg	SL-003-SA8N-SB-4.0-5.0

The following samples and their listed target analytes were qualified due to contamination reported in this blank

Sample ID	Analyte	Reported Result	Modified Final Result
SL-003-SA8N-SB-4.0-5.0(RES)	ACETONE	11 ug/Kg	11U ug/Kg
SL-003-SA8N-SB-4.0-5.0(RES)	METHYLENE CHLORIDE	1.1 ug/Kg	4.4U ug/Kg

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: DE167_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-117-SA5DN -SS-0.0-0.5MS SL-117-SA5DN -SS-0.0-0.5MSD (SL-117-SA5DN -SS-0.0-0.5)	DIETHYLENE GLYCOL ETHYLENE GLYCOL Propylene glycol	45 - -	40 57 62	59.00-109.00 63.00-107.00 63.00-107.00	- - -	DIETHYLENE GLYCOL ETHYLENE GLYCOL Propylene glycol	J (all detects) UJ (all non-detects)

Method: 8015B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-117-SA5DN -SS-0.0-0.5MS SL-117-SA5DN -SS-0.0-0.5MSD (SL-117-SA5DN -SS-0.0-0.5)	p-Terphenyl	28	63	75.00-125.00	21 (20.00)	p-Terphenyl	J(all detects) UJ(all non-detects)

Method: 8015M
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-117-SA5DN -SS-0.0-0.5MS SL-117-SA5DN -SS-0.0-0.5MSD (SL-117-SA5DN -SS-0.0-0.5)	EFH (C12-C14) EFH (C15-C20) EFH (C21-C30) EFH (C30-C40) EFH (C8-C11)	0 -196 -889 -226 0	0 -43 -1432 -1853 0	49.00-123.00 49.00-123.00 49.00-123.00 49.00-123.00 49.00-123.00	- 26 (20.00) 31 (20.00) 25 (20.00) -	EFH (C12-C14) EFH (C15-C20) EFH (C21-C30) EFH (C30-C40) EFH (C8-C11)	No Qual Diluted Out

Method: 1625C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-117-SA5DN -SS-0.0-0.5MS SL-117-SA5DN -SS-0.0-0.5MSD (SL-117-SA5DN -SS-0.0-0.5)	N-NITROSODIMETHYLAMINE	157	136	70.00-130.00	-	N-NITROSODIMETHYLAMINE	J(all detects)

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-117-SA5DN -SS-0.0-0.5MSD (SL-117-SA5DN -SS-0.0-0.5)	3,3'-DICHLOROBENZIDINE HEXACHLOROCYCLOPENTADI	- -	- -	16.00-119.00 10.00-153.00	33 (30.00) 79 (30.00)	3,3'-DICHLOROBENZIDINE HEXACHLOROCYCLOPENTAD	J(all detects)
SL-117-SA5DN -SS-0.0-0.5MS SL-117-SA5DN -SS-0.0-0.5MSD (SL-117-SA5DN -SS-0.0-0.5)	BENZIDINE	0	0	35.00-141.00	-	BENZIDINE	J(all detects) R(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: DE167_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C SIM
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-117-SA5DN-SS-0.0-0.5MS SL-117-SA5DN-SS-0.0-0.5MSD (SL-117-SA5DN-SS-0.0-0.5)	BENZO(A)ANTHRACENE	142	-	59.00-128.00	47 (30.00)	BENZO(A)ANTHRACENE	No Qual, Diluted Out
	BENZO(A)PYRENE	156	-	45.00-138.00	57 (30.00)	BENZO(A)PYRENE	
	BENZO(B)FLUORANTHENE	166	-	43.00-155.00	57 (30.00)	BENZO(B)FLUORANTHENE	
	BENZO(G,H,I)PERYLENE	-	-	33.00-141.00	33 (30.00)	BENZO(G,H,I)PERYLENE	
	BENZO(K)FLUORANTHENE	-	-	42.00-144.00	50 (30.00)	BENZO(K)FLUORANTHENE	
	FLUORANTHENE	221	-	26.00-166.00	83 (30.00)	FLUORANTHENE	
	INDENO(1,2,3-CD)PYRENE	-	-	21.00-143.00	40 (30.00)	INDENO(1,2,3-CD)PYRENE	
	PHENANTHRENE	167	-	12.00-165.00	66 (30.00)	PHENANTHRENE	
	PYRENE	188	-	15.00-153.00	72 (30.00)	PYRENE	
SL-117-SA5DN-SS-0.0-0.5MS SL-117-SA5DN-SS-0.0-0.5MSD (SL-117-SA5DN-SS-0.0-0.5)	CHRYSENE	-	-4	48.00-134.00	37 (30.00)	CHRYSENE	No Qual Diluted Out
	Diethylphthalate	-	0	70.00-136.00	200 (30.00)	Diethylphthalate	
	Dimethylphthalate	0	0	74.00-118.00	-	Dimethylphthalate	

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-117-SA5DN-SS-0.0-0.5MS (DUP09-SA5DN-QC-052711 SL-003-SA8N-SB-4.0-5.0 SL-003-SA8N-SB-9.0-10.0 SL-071-SA5DN-SS-0.0-0.5 SL-091-SA5DN-SS-0.0-0.5 SL-092-SA5DN-SS-0.0-0.5 SL-093-SA5DN-SS-0.0-0.5 SL-117-SA5DN-SS-0.0-0.5 SL-118-SA5DN-SS-0.0-0.5 SL-119-SA5DN-SS-0.0-0.5 SL-120-SA5DN-SS-0.0-0.5 SL-122-SA5DN-SS-0.0-0.5)	LEAD	143	-	75.00-125.00	-	LEAD	J(all detects)
SL-117-SA5DN-SS-0.0-0.5MS SL-117-SA5DN-SS-0.0-0.5MSD (DUP09-SA5DN-QC-052711 SL-003-SA8N-SB-4.0-5.0 SL-003-SA8N-SB-9.0-10.0 SL-071-SA5DN-SS-0.0-0.5 SL-091-SA5DN-SS-0.0-0.5 SL-092-SA5DN-SS-0.0-0.5 SL-093-SA5DN-SS-0.0-0.5 SL-117-SA5DN-SS-0.0-0.5 SL-118-SA5DN-SS-0.0-0.5 SL-119-SA5DN-SS-0.0-0.5 SL-120-SA5DN-SS-0.0-0.5 SL-122-SA5DN-SS-0.0-0.5)	ANTIMONY	28	32	75.00-125.00	-	ANTIMONY	J(all detects) UJ(all non-detects) Post Spike=102%
SL-117-SA5DN-SS-0.0-0.5MS (DUP09-SA5DN-QC-052711 SL-003-SA8N-SB-4.0-5.0 SL-003-SA8N-SB-9.0-10.0 SL-071-SA5DN-SS-0.0-0.5 SL-091-SA5DN-SS-0.0-0.5 SL-092-SA5DN-SS-0.0-0.5 SL-093-SA5DN-SS-0.0-0.5 SL-117-SA5DN-SS-0.0-0.5 SL-118-SA5DN-SS-0.0-0.5 SL-119-SA5DN-SS-0.0-0.5 SL-120-SA5DN-SS-0.0-0.5 SL-122-SA5DN-SS-0.0-0.5)	BERYLLIUM	62	-	75.00-125.00	-	BERYLLIUM	J(all detects) UJ(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: DE167_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-117-SA5DN-SS-0.0-0.5MSD (DUP09-SA5DN-QC-052711 SL-003-SA8N-SB-4.0-5.0 SL-003-SA8N-SB-9.0-10.0 SL-071-SA5DN-SS-0.0-0.5 SL-091-SA5DN-SS-0.0-0.5 SL-092-SA5DN-SS-0.0-0.5 SL-093-SA5DN-SS-0.0-0.5 SL-117-SA5DN-SS-0.0-0.5 SL-118-SA5DN-SS-0.0-0.5 SL-119-SA5DN-SS-0.0-0.5 SL-120-SA5DN-SS-0.0-0.5 SL-122-SA5DN-SS-0.0-0.5)	BARIUM	-	134	75.00-125.00	-	BARIUM	No Qual, >4x

Method: 6010B
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-117-SA5DN-SS-0.0-0.5MS	ALUMINUM	1015	1227	75.00-125.00	-	ALUMINUM	
SL-117-SA5DN-SS-0.0-0.5MSD	POTASSIUM	137	126	75.00-125.00	-	POTASSIUM	
(DUP09-SA5DN-QC-052711	TITANIUM	182	226	75.00-125.00	-	TITANIUM	
SL-003-SA8N-SB-4.0-5.0 SL-003-SA8N-SB-9.0-10.0 SL-071-SA5DN-SS-0.0-0.5 SL-091-SA5DN-SS-0.0-0.5 SL-092-SA5DN-SS-0.0-0.5 SL-093-SA5DN-SS-0.0-0.5 SL-117-SA5DN-SS-0.0-0.5 SL-118-SA5DN-SS-0.0-0.5 SL-119-SA5DN-SS-0.0-0.5 SL-120-SA5DN-SS-0.0-0.5 SL-122-SA5DN-SS-0.0-0.5)							No Qual, >4x
SL-117-SA5DN-SS-0.0-0.5MS	IRON	438	-2108	75.00-125.00	-	IRON	
SL-117-SA5DN-SS-0.0-0.5MSD	MANGANESE	-	-18	75.00-125.00	-	MANGANESE	
(DUP09-SA5DN-QC-052711 SL-003-SA8N-SB-4.0-5.0 SL-003-SA8N-SB-9.0-10.0 SL-071-SA5DN-SS-0.0-0.5 SL-091-SA5DN-SS-0.0-0.5 SL-092-SA5DN-SS-0.0-0.5 SL-093-SA5DN-SS-0.0-0.5 SL-117-SA5DN-SS-0.0-0.5 SL-118-SA5DN-SS-0.0-0.5 SL-119-SA5DN-SS-0.0-0.5 SL-120-SA5DN-SS-0.0-0.5 SL-122-SA5DN-SS-0.0-0.5)							No Qual, >4x

Lab Duplicate Outlier Report

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: DE167_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-117-SA5DN-SS-0.0-0.5DUP (DUP09-SA5DN-QC-052711 SL-003-SA8N-SB-4.0-5.0 SL-003-SA8N-SB-9.0-10.0 SL-071-SA5DN-SS-0.0-0.5 SL-091-SA5DN-SS-0.0-0.5 SL-092-SA5DN-SS-0.0-0.5 SL-093-SA5DN-SS-0.0-0.5 SL-117-SA5DN-SS-0.0-0.5 SL-118-SA5DN-SS-0.0-0.5 SL-119-SA5DN-SS-0.0-0.5 SL-120-SA5DN-SS-0.0-0.5 SL-122-SA5DN-SS-0.0-0.5)	SILVER	36	20.00	No Qual, OK by difference

Method: 7199
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-117-SA5DN-SS-0.0-0.5DUP (DUP09-SA5DN-QC-052711 SL-003-SA8N-SB-4.0-5.0 SL-003-SA8N-SB-9.0-10.0 SL-071-SA5DN-SS-0.0-0.5 SL-091-SA5DN-SS-0.0-0.5 SL-092-SA5DN-SS-0.0-0.5 SL-093-SA5DN-SS-0.0-0.5 SL-117-SA5DN-SS-0.0-0.5 SL-118-SA5DN-SS-0.0-0.5 SL-119-SA5DN-SS-0.0-0.5 SL-120-SA5DN-SS-0.0-0.5 SL-122-SA5DN-SS-0.0-0.5)	HEXAVALENT CHROMIUM	30	20.00	No Qual, OK by difference

Method: 7471A
Matrix: SO

QC Sample ID (Associated Sample ID)	Analyte	Sample RPD	eQAPP RPD	Flag
SL-117-SA5DN-SS-0.0-0.5DUP (DUP09-SA5DN-QC-052711 SL-003-SA8N-SB-4.0-5.0 SL-003-SA8N-SB-9.0-10.0 SL-071-SA5DN-SS-0.0-0.5 SL-091-SA5DN-SS-0.0-0.5 SL-092-SA5DN-SS-0.0-0.5 SL-093-SA5DN-SS-0.0-0.5 SL-117-SA5DN-SS-0.0-0.5 SL-118-SA5DN-SS-0.0-0.5 SL-119-SA5DN-SS-0.0-0.5 SL-120-SA5DN-SS-0.0-0.5)	MERCURY	1.4942	0.208	J(all detects) UJ(all non-detects)

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE167 Laboratory: LL

EDD Filename: DE167_v1 eQAPP Name: CDM_SSFL_110509

Method: 8270C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P3LFLCSQ260356 (DUP09-SA5DN-QC-052711 SL-003-SA8N-SB-4.0-5.0 SL-003-SA8N-SB-9.0-10.0 SL-071-SA5DN-SS-0.0-0.5 SL-091-SA5DN-SS-0.0-0.5 SL-092-SA5DN-SS-0.0-0.5 SL-093-SA5DN-SS-0.0-0.5 SL-117-SA5DN-SS-0.0-0.5 SL-118-SA5DN-SS-0.0-0.5 SL-119-SA5DN-SS-0.0-0.5 SL-120-SA5DN-SS-0.0-0.5 SL-122-SA5DN-SS-0.0-0.5)	2,4-DINITROPHENOL	35	-	37.00-120.00	-	2,4-DINITROPHENOL	J (all detects) UJ (all non-detects)

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P15726HQ222327A (DUP09-SA5DN-QC-052711 SL-003-SA8N-SB-4.0-5.0 SL-003-SA8N-SB-9.0-10.0 SL-071-SA5DN-SS-0.0-0.5 SL-091-SA5DN-SS-0.0-0.5 SL-092-SA5DN-SS-0.0-0.5 SL-093-SA5DN-SS-0.0-0.5 SL-117-SA5DN-SS-0.0-0.5 SL-118-SA5DN-SS-0.0-0.5 SL-119-SA5DN-SS-0.0-0.5 SL-120-SA5DN-SS-0.0-0.5 SL-122-SA5DN-SS-0.0-0.5)	ANTIMONY	64	-	80.00-120.00	-	ANTIMONY	No Qual, SRM within QC limits

Surrogate Outlier Report

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: DE167_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8081A**
Matrix: **SO**

Sample ID	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
DUP09-SA5DN-QC-052711	TETRACHLORO-M-XYLENE	48	50.00-130.00	All Target Analytes	J (all detects) UJ (all non-detects)
SL-117-SA5DN-SS-0.0-0.5	DECACHLOROBIPHENYL	135	20.00-120.00	All Target Analytes	J(all detects)
SL-119-SA5DN-SS-0.0-0.5	DECACHLOROBIPHENYL	173	20.00-120.00	All Target Analytes	J(all detects)
SL-120-SA5DN-SS-0.0-0.5	TETRACHLORO-M-XYLENE	48	50.00-130.00	All Target Analytes	J(all detects) UJ(all non-detects)
SL-122-SA5DN-SS-0.0-0.5	DECACHLOROBIPHENYL	146	20.00-120.00	All Target Analytes	J(all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DE167 Laboratory: LL

EDD Filename: DE167_v1 eQAPP Name: CDM_SSFL_110509

Method: 160.3M
Matrix: SO

Analyte	Concentration (%)		Sample RPD	eQAPP RPD	Flag
	SL-117-SA5DN-SS-0.0-0.5	DUP09-SA5DN-QC-052711			
MOISTURE	9.5	9.5	0		No Qualifiers Applied

Method: 300.0
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-117-SA5DN-SS-0.0-0.5	DUP09-SA5DN-QC-052711			
FLUORIDE	1.6	2.0	22	50.00	No Qualifiers Applied
Nitrate-NO3	2.4	3.0	22	50.00	

Method: 6010B
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-117-SA5DN-SS-0.0-0.5	DUP09-SA5DN-QC-052711			
ALUMINUM	30100	30000	0	50.00	No Qualifiers Applied
CALCIUM	5500	5290	4	50.00	
IRON	31800	32300	2	50.00	
LITHIUM	24.1	23.2	4	50.00	
MAGNESIUM	6580	6500	1	50.00	
MANGANESE	464	503	8	50.00	
PHOSPHORUS	387	396	2	50.00	
POTASSIUM	5780	5660	2	50.00	
SODIUM	101	92.8	8	50.00	
STRONTIUM	31.7	30.6	4	50.00	
TIN	2.75	2.59	6	50.00	
TITANIUM	1420	1350	5	50.00	
Zirconium	4.09	3.46	17	50.00	

Method: 6020
Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-117-SA5DN-SS-0.0-0.5	DUP09-SA5DN-QC-052711			
ANTIMONY	0.135	0.101	29	50.00	No Qualifiers Applied
ARSENIC	5.24	5.39	3	50.00	
BARIUM	138	134	3	50.00	
BERYLLIUM	0.889	0.897	1	50.00	
CADMIUM	0.500	0.489	2	50.00	
CHROMIUM	31.0	29.3	6	50.00	
COBALT	9.33	9.49	2	50.00	
COPPER	16.4	16.6	1	50.00	
LEAD	12.6	13.6	8	50.00	
MOLYBDENUM	0.536	0.519	3	50.00	
NICKEL	21.1	21.0	0	50.00	
SELENIUM	0.195	0.193	1	50.00	
SILVER	0.0643	0.0556	15	50.00	
THALLIUM	0.362	0.354	2	50.00	
VANADIUM	56.6	54.9	3	50.00	
ZINC	80.2	78.8	2	50.00	

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Field Duplicate RPD Report

Lab Reporting Batch ID: DE167 Laboratory: LL

EDD Filename: DE167_v1 eQAPP Name: CDM_SSFL_110509

Method: 7199
Matrix: SO

Analyte	Concentration (mg/Kg) SL-117-SA5DN-SS-0.0-0.5	Concentration (mg/Kg) DUP09-SA5DN-QC-052711	Sample RPD	eQAPP RPD	Flag
HEXAVALENT CHROMIUM	1.5	0.78	63	50.00	J(all detects)

Method: 7471A
Matrix: SO

Analyte	Concentration (mg/Kg) SL-117-SA5DN-SS-0.0-0.5	Concentration (mg/Kg) DUP09-SA5DN-QC-052711	Sample RPD	eQAPP RPD	Flag
MERCURY	0.0644	0.0407	45	50.00	No Qualifiers Applied

Method: 8015B
Matrix: SO

Analyte	Concentration (mg/Kg) SL-117-SA5DN-SS-0.0-0.5	Concentration (mg/Kg) DUP09-SA5DN-QC-052711	Sample RPD	eQAPP RPD	Flag
p-Terphenyl	2.2	1.7	26	50.00	No Qualifiers Applied

Method: 8015M
Matrix: SO

Analyte	Concentration (mg/Kg) SL-117-SA5DN-SS-0.0-0.5	Concentration (mg/Kg) DUP09-SA5DN-QC-052711	Sample RPD	eQAPP RPD	Flag
EFH (C15-C20)	9.8	9.8	0	50.00	No Qualifiers Applied
EFH (C21-C30) EFH (C30-C40)	67 210	30 72	76 98	50.00 50.00	J(all detects)

Method: 8081A
Matrix: SO

Analyte	Concentration (ug/Kg) SL-117-SA5DN-SS-0.0-0.5	Concentration (ug/Kg) DUP09-SA5DN-QC-052711	Sample RPD	eQAPP RPD	Flag
4,4'-DDE 4,4'-DDT Chlordane	0.52 1.1 2.3	0.47 0.97 2.1	10 13 9	50.00 50.00 50.00	No Qualifiers Applied
HEPTACHLOR EPOXIDE MIREX	0.095 0.38 U	0.18 U 0.26	200 200	50.00 50.00	J(all detects) UJ(all non-detects)

Method: 8082
Matrix: SO

Analyte	Concentration (ug/Kg) SL-117-SA5DN-SS-0.0-0.5	Concentration (ug/Kg) DUP09-SA5DN-QC-052711	Sample RPD	eQAPP RPD	Flag
AROCLOR 1260	4.0	6.1	42	50.00	No Qualifiers Applied
Aroclor 5460	1.9	5.0	90	50.00	J(all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DE167 Laboratory: LL

EDD Filename: DE167_v1 eQAPP Name: CDM_SSFL_110509

Method: 8151A
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-117-SA5DN-SS-0.0-0.5	DUP09-SA5DN-QC-052711			
MCPA	490 U	400	200	50.00	J(all detects) UJ(all non-detects)

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (ug/Kg)		Sample RPD	eQAPP RPD	Flag
	SL-117-SA5DN-SS-0.0-0.5	DUP09-SA5DN-QC-052711			
ANTHRACENE	4.5	5.0	11	50.00	No Qualifiers Applied
BENZO(A)ANTHRACENE	6.7	47	150	50.00	
BENZO(A)PYRENE	7.2	40	139	50.00	
BENZO(B)FLUORANTHENE	13	67	135	50.00	
BENZO(G,H,I)PERYLENE	7.6	13	52	50.00	
BENZO(K)FLUORANTHENE	6.0	36	143	50.00	J(all detects)
DIBENZO(A,H)ANTHRACENE	9.2 U	5.3	200	50.00	UJ(all non-detects)
FLUORANTHENE	10	96	162	50.00	
INDENO(1,2,3-CD)PYRENE	3.9	14	113	50.00	
PHENANTHRENE	4.8	25	136	50.00	
PYRENE	13	76	142	50.00	

Method: 9045M
Matrix: SO

Analyte	Concentration (pH unit)		Sample RPD	eQAPP RPD	Flag
	SL-117-SA5DN-SS-0.0-0.5	DUP09-SA5DN-QC-052711			
PH	6.85	6.84	0	50.00	No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: DE167_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8260B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-052711	BENZENE	J	1	5	PQL	ug/L	J (all detects)
	TOLUENE	J	0.7	5	PQL	ug/L	

Method: 1625C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-119-SA5DN-SS-0.0-0.5	N-NITROSODIMETHYLAMINE	J	252	368	PQL	ng/Kg	J (all detects)
SL-120-SA5DN-SS-0.0-0.5	N-NITROSODIMETHYLAMINE	J	320	366	PQL	ng/Kg	J (all detects)

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-122-SA5DN-SS-0.0-0.5	FLUORIDE	J	1.1	1.2	PQL	mg/Kg	J (all detects)

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP09-SA5DN-QC-052711	SODIUM	J	92.8	106	PQL	mg/Kg	J (all detects)
	TIN	J	2.59	10.6	PQL	mg/Kg	
	Zirconium	J	3.46	5.31	PQL	mg/Kg	
SL-003-SA8N-SB-4.0-5.0	TIN	J	2.76	11.7	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.43	5.87	PQL	mg/Kg	
SL-003-SA8N-SB-9.0-10.0	TIN	J	2.67	12.4	PQL	mg/Kg	J (all detects)
	Zirconium	J	4.26	6.18	PQL	mg/Kg	
SL-071-SA5DN-SS-0.0-0.5	TIN	J	2.56	11.0	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.11	5.49	PQL	mg/Kg	
SL-091-SA5DN-SS-0.0-0.5	SODIUM	J	95.2	106	PQL	mg/Kg	J (all detects)
	TIN	J	2.72	10.6	PQL	mg/Kg	
	Zirconium	J	3.34	5.31	PQL	mg/Kg	
SL-092-SA5DN-SS-0.0-0.5	SODIUM	J	89.2	111	PQL	mg/Kg	J (all detects)
	TIN	J	2.66	11.1	PQL	mg/Kg	
	Zirconium	J	3.92	5.53	PQL	mg/Kg	
SL-093-SA5DN-SS-0.0-0.5	SODIUM	J	92.0	105	PQL	mg/Kg	J (all detects)
	TIN	J	2.64	10.5	PQL	mg/Kg	
	Zirconium	J	3.78	5.25	PQL	mg/Kg	
SL-117-SA5DN-SS-0.0-0.5	SODIUM	J	101	108	PQL	mg/Kg	J (all detects)
	TIN	J	2.75	10.8	PQL	mg/Kg	
	Zirconium	J	4.09	5.42	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: DE167_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6010B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-118-SA5DN-SS-0.0-0.5	SODIUM	J	95.6	109	PQL	mg/Kg	
	TIN	J	2.65	10.9	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.47	5.45	PQL	mg/Kg	
SL-119-SA5DN-SS-0.0-0.5	SODIUM	J	87.5	107	PQL	mg/Kg	
	TIN	J	2.59	10.7	PQL	mg/Kg	J (all detects)
	Zirconium	J	2.94	5.33	PQL	mg/Kg	
SL-120-SA5DN-SS-0.0-0.5	SODIUM	J	92.5	106	PQL	mg/Kg	
	TIN	J	2.79	10.6	PQL	mg/Kg	J (all detects)
	Zirconium	J	3.04	5.28	PQL	mg/Kg	
SL-122-SA5DN-SS-0.0-0.5	SODIUM	J	96.5	118	PQL	mg/Kg	
	TIN	J	3.07	11.8	PQL	mg/Kg	J (all detects)
	Zirconium	J	4.09	5.91	PQL	mg/Kg	

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP09-SA5DN-QC-052711	ANTIMONY	J	0.101	0.219	PQL	mg/Kg	
	SELENIUM	J	0.193	0.438	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0556	0.109	PQL	mg/Kg	
SL-003-SA8N-SB-4.0-5.0	ANTIMONY	J	0.116	0.226	PQL	mg/Kg	
	SELENIUM	J	0.140	0.451	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0394	0.113	PQL	mg/Kg	
SL-003-SA8N-SB-9.0-10.0	ANTIMONY	J	0.0916	0.242	PQL	mg/Kg	
	SELENIUM	J	0.137	0.485	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0602	0.121	PQL	mg/Kg	
SL-071-SA5DN-SS-0.0-0.5	ANTIMONY	J	0.136	0.213	PQL	mg/Kg	
	SELENIUM	J	0.177	0.427	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0305	0.107	PQL	mg/Kg	
SL-091-SA5DN-SS-0.0-0.5	ANTIMONY	J	0.171	0.212	PQL	mg/Kg	
	SELENIUM	J	0.161	0.424	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0521	0.106	PQL	mg/Kg	
SL-092-SA5DN-SS-0.0-0.5	ANTIMONY	J	0.0839	0.223	PQL	mg/Kg	
	SELENIUM	J	0.171	0.447	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0519	0.112	PQL	mg/Kg	
SL-093-SA5DN-SS-0.0-0.5	ANTIMONY	J	0.126	0.212	PQL	mg/Kg	
	SELENIUM	J	0.214	0.424	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0473	0.106	PQL	mg/Kg	
SL-117-SA5DN-SS-0.0-0.5	ANTIMONY	J	0.135	0.217	PQL	mg/Kg	
	SELENIUM	J	0.195	0.433	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0643	0.108	PQL	mg/Kg	
SL-118-SA5DN-SS-0.0-0.5	ANTIMONY	J	0.112	0.216	PQL	mg/Kg	
	SELENIUM	J	0.185	0.431	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0376	0.108	PQL	mg/Kg	
SL-119-SA5DN-SS-0.0-0.5	ANTIMONY	J	0.123	0.215	PQL	mg/Kg	
	SELENIUM	J	0.184	0.431	PQL	mg/Kg	J (all detects)
	SILVER	J	0.0569	0.108	PQL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: DE167_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-120-SA5DN-SS-0.0-0.5	ANTIMONY	J	0.136	0.220	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.156	0.440	PQL	mg/Kg	
SL-122-SA5DN-SS-0.0-0.5	ANTIMONY	J	0.130	0.227	PQL	mg/Kg	J (all detects)
	SELENIUM	J	0.213	0.455	PQL	mg/Kg	
	SILVER	J	0.0558	0.114	PQL	mg/Kg	

Method: 7199

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP09-SA5DN-QC-052711	HEXAVALENT CHROMIUM	J	0.78	1.1	PQL	mg/Kg	J (all detects)
SL-003-SA8N-SB-4.0-5.0	HEXAVALENT CHROMIUM	J	0.31	1.2	PQL	mg/Kg	J (all detects)
SL-003-SA8N-SB-9.0-10.0	HEXAVALENT CHROMIUM	J	0.40	1.2	PQL	mg/Kg	J (all detects)
SL-071-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.77	1.1	PQL	mg/Kg	J (all detects)
SL-091-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.59	1.1	PQL	mg/Kg	J (all detects)
SL-093-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.95	1.1	PQL	mg/Kg	J (all detects)
SL-118-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	1.0	1.1	PQL	mg/Kg	J (all detects)
SL-119-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	1.0	1.1	PQL	mg/Kg	J (all detects)
SL-122-SA5DN-SS-0.0-0.5	HEXAVALENT CHROMIUM	J	0.72	1.2	PQL	mg/Kg	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP09-SA5DN-QC-052711	MERCURY	J	0.0407	0.106	PQL	mg/Kg	J (all detects)
SL-071-SA5DN-SS-0.0-0.5	MERCURY	J	0.0036	0.109	PQL	mg/Kg	J (all detects)
SL-091-SA5DN-SS-0.0-0.5	MERCURY	J	0.0351	0.105	PQL	mg/Kg	J (all detects)
SL-092-SA5DN-SS-0.0-0.5	MERCURY	J	0.0048	0.106	PQL	mg/Kg	J (all detects)
SL-093-SA5DN-SS-0.0-0.5	MERCURY	J	0.0127	0.107	PQL	mg/Kg	J (all detects)
SL-117-SA5DN-SS-0.0-0.5	MERCURY	J	0.0644	0.104	PQL	mg/Kg	J (all detects)
SL-118-SA5DN-SS-0.0-0.5	MERCURY	J	0.0247	0.110	PQL	mg/Kg	J (all detects)
SL-119-SA5DN-SS-0.0-0.5	MERCURY	J	0.0644	0.107	PQL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: DE167_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8015B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP09-SA5DN-QC-052711	p-Terphenyl	J	1.7	3.9	PQL	mg/Kg	J (all detects)
SL-117-SA5DN-SS-0.0-0.5	p-Terphenyl	J	2.2	3.9	PQL	mg/Kg	J (all detects)
SL-119-SA5DN-SS-0.0-0.5	p-Terphenyl	J	12	19	PQL	mg/Kg	J (all detects)
SL-120-SA5DN-SS-0.0-0.5	p-Terphenyl	J	6.6	7.7	PQL	mg/Kg	J (all detects)

Method: 8015M

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-119-SA5DN-SS-0.0-0.5	EFH (C15-C20)	J	12	13	PQL	mg/Kg	J (all detects)

Method: 8081A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP09-SA5DN-QC-052711	Chlordane MIREX	J J	2.1 0.26	3.8 0.38	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-071-SA5DN-SS-0.0-0.5	ENDRIN KETONE	J	0.23	0.37	PQL	ug/Kg	J (all detects)
SL-091-SA5DN-SS-0.0-0.5	Chlordane HEPTACHLOR EPOXIDE	J J	2.3 0.050	3.7 0.18	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-092-SA5DN-SS-0.0-0.5	Chlordane ENDOSULFAN SULFATE	J J	2.7 0.27	3.8 0.38	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-093-SA5DN-SS-0.0-0.5	Chlordane	J	2.4	3.7	PQL	ug/Kg	J (all detects)
SL-117-SA5DN-SS-0.0-0.5	Chlordane HEPTACHLOR EPOXIDE	J J	2.3 0.095	3.8 0.18	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-118-SA5DN-SS-0.0-0.5	4,4'-DDD 4,4'-DDE 4,4'-DDT MIREX	J J J J	0.076 0.19 0.16 0.31	0.37 0.37 0.37 0.37	PQL PQL PQL PQL	ug/Kg ug/Kg ug/Kg ug/Kg	J (all detects)
SL-119-SA5DN-SS-0.0-0.5	4,4'-DDE DELTA-BHC	J J	0.31 0.086	0.38 0.18	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-122-SA5DN-SS-0.0-0.5	Chlordane	J	3.0	4.0	PQL	ug/Kg	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-071-SA5DN-SS-0.0-0.5	Aroclor 5460	J	1.6	3.6	PQL	ug/Kg	J (all detects)
SL-093-SA5DN-SS-0.0-0.5	Aroclor 5460	J	1.9	3.6	PQL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: DE167_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-117-SA5DN-SS-0.0-0.5	Aroclor 5460	J	1.9	3.6	PQL	ug/Kg	J (all detects)
SL-119-SA5DN-SS-0.0-0.5	AROCLOR 1260 Aroclor 5460	J J	1.7 2.1	1.9 3.6	PQL PQL	ug/Kg ug/Kg	J (all detects)
SL-120-SA5DN-SS-0.0-0.5	Aroclor 5460	J	12	18	PQL	ug/Kg	J (all detects)
SL-122-SA5DN-SS-0.0-0.5	AROCLOR 1260	J	1.9	2.0	PQL	ug/Kg	J (all detects)

Method: 8151A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-091-SA5DN-SS-0.0-0.5	2,4,5-TP (Silvex)	J	0.10	0.19	PQL	ug/Kg	J (all detects)
SL-092-SA5DN-SS-0.0-0.5	2,4,5-TP (Silvex)	J	0.16	0.19	PQL	ug/Kg	J (all detects)
SL-093-SA5DN-SS-0.0-0.5	2,4,5-TP (Silvex)	J	0.15	0.18	PQL	ug/Kg	J (all detects)

Method: 8260B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-003-SA8N-SB-4.0-5.0	METHYLENE CHLORIDE	J	1.1	4.4	PQL	ug/Kg	J (all detects)

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-003-SA8N-SB-4.0-5.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	25	390	PQL	ug/Kg	J (all detects)
SL-003-SA8N-SB-9.0-10.0	BIS(2-ETHYLHEXYL)PHTHALATE	J	23	410	PQL	ug/Kg	J (all detects)
SL-071-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	43	360	PQL	ug/Kg	J (all detects)
SL-091-SA5DN-SS-0.0-0.5	BENZO(A)ANTHRACENE BENZO(A)PYRENE BENZO(B)FLUORANTHENE BENZO(K)FLUORANTHENE BIS(2-ETHYLHEXYL)PHTHALATE Butylbenzylphthalate CHRYSENE FLUORANTHENE PHENANTHRENE PYRENE	J J J J J J J J J J	56 58 68 27 43 24 78 120 76 130	180 180 180 180 360 180 180 180 180 180	PQL PQL PQL PQL PQL PQL PQL PQL PQL PQL	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	J (all detects)
SL-092-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	40	370	PQL	ug/Kg	J (all detects)
SL-093-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	33	360	PQL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: DE167_v1 **eQAPP Name: CDM_SSFL_110509**

Method: 8270C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-117-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	51	370	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	130	180	PQL	ug/Kg	
SL-118-SA5DN-SS-0.0-0.5	BENZO(A)ANTHRACENE	J	23	180	PQL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	25	180	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	35	360	PQL	ug/Kg	
	FLUORANTHENE	J	40	180	PQL	ug/Kg	
	PHENANTHRENE	J	24	180	PQL	ug/Kg	
	PYRENE	J	41	180	PQL	ug/Kg	
SL-119-SA5DN-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	38	370	PQL	ug/Kg	J (all detects)
SL-120-SA5DN-SS-0.0-0.5	BENZO(A)PYRENE	J	26	180	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	130	180	PQL	ug/Kg	
	Di-n-butylphthalate	J	66	180	PQL	ug/Kg	
	FLUORANTHENE	J	48	180	PQL	ug/Kg	
	PHENANTHRENE	J	41	180	PQL	ug/Kg	
	PYRENE	J	46	180	PQL	ug/Kg	
SL-122-SA5DN-SS-0.0-0.5	ANTHRACENE	J	43	200	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	140	200	PQL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	170	200	PQL	ug/Kg	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	48	390	PQL	ug/Kg	
	CARBAZOLE	J	28	200	PQL	ug/Kg	
	DIBENZO(A,H)ANTHRACENE	J	43	200	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	180	200	PQL	ug/Kg	

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP09-SA5DN-QC-052711	ANTHRACENE	J	5.0	9.2	PQL	ug/Kg	J (all detects)
	BIS(2-ETHYLHEXYL)PHTHALATE	J	68	99	PQL	ug/Kg	
	DIBENZO(A,H)ANTHRACENE	J	5.3	9.2	PQL	ug/Kg	
SL-071-SA5DN-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	5.1	9.2	PQL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	8.7	9.2	PQL	ug/Kg	
	CHRYSENE	J	2.7	9.2	PQL	ug/Kg	
SL-091-SA5DN-SS-0.0-0.5	ANTHRACENE	J	3.5	9.0	PQL	ug/Kg	J (all detects)
	DIBENZO(A,H)ANTHRACENE	J	3.8	9.0	PQL	ug/Kg	
SL-092-SA5DN-SS-0.0-0.5	ACENAPHTHENE	J	7.5	9.3	PQL	ug/Kg	J (all detects)
	DIBENZO(A,H)ANTHRACENE	J	8.0	9.3	PQL	ug/Kg	
	FLUORENE	J	6.0	9.3	PQL	ug/Kg	
SL-093-SA5DN-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	4.9	9.0	PQL	ug/Kg	J (all detects)
	CHRYSENE	J	5.6	9.0	PQL	ug/Kg	
	FLUORANTHENE	J	7.8	9.0	PQL	ug/Kg	
	PHENANTHRENE	J	4.8	9.0	PQL	ug/Kg	
	PYRENE	J	7.0	9.0	PQL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: DE167 **Laboratory: LL**

EDD Filename: DE167_v1 **eQAPP Name: CDM_SSFL_110509**

Method: **8270C SIM**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-117-SA5DN-SS-0.0-0.5	ANTHRACENE	J	4.5	9.2	PQL	ug/Kg	
	BENZO(A)ANTHRACENE	J	6.7	9.2	PQL	ug/Kg	
	BENZO(A)PYRENE	J	7.2	9.2	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	7.6	9.2	PQL	ug/Kg	J (all detects)
	BENZO(K)FLUORANTHENE	J	6.0	9.2	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	3.9	9.2	PQL	ug/Kg	
	PHENANTHRENE	J	4.8	9.2	PQL	ug/Kg	
SL-118-SA5DN-SS-0.0-0.5	ANTHRACENE	J	1.6	1.8	PQL	ug/Kg	J (all detects)
SL-120-SA5DN-SS-0.0-0.5	ANTHRACENE	J	3.5	9.0	PQL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	7.5	9.0	PQL	ug/Kg	J (all detects)
	BENZO(K)FLUORANTHENE	J	7.7	9.0	PQL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	3.7	9.0	PQL	ug/Kg	

LDC #: 26275Y4 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/29/11
SDG #: DE167 ADR Page: 1 of 1
Laboratory: Lancaster Laboratories Reviewer: MM
2nd Reviewer: CR

METHOD: Metals (EPA SW 846 Method 6010B/6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	N	Sampling dates:
II.	ICP/MS Tune	N	
III.	Calibration	N	
IV.	Blanks	A	No final
V.	ICP Interference Check Sample (ICS) Analysis	N	
VI.	Matrix Spike Analysis	J N SW	Al, Ba, Fe, Mn, K, Ti: >4X
VII.	Duplicate Sample Analysis	SW N	Ag < 5X,
VIII.	Laboratory Control Samples (LCS)	N A	SRM,
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	Mn.
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	SL-071-SA5DN-SS-0.0-0.5	11	SL-003-SA8N-SB-4.0-5.0	21		31	
2	SL-091-SA5DN-SS-0.0-0.5	12	SL-003-SA8N-SB-9.0-10.0	22		32	
3	SL-092-SA5DN-SS-0.0-0.5	13	SL-117-SA5DN-SS-0.0-0.5MS	23		33	
4	SL-093-SA5DN-SS-0.0-0.5	14	SL-117-SA5DN-SS-0.0-0.5MSD	24		34	
5	SL-117-SA5DN-SS-0.0-0.5	15	SL-117-SA5DN-SS-0.0-0.5DUP	25		35	
6	SL-118-SA5DN-SS-0.0-0.5	16		26		36	
7	SL-119-SA5DN-SS-0.0-0.5	17		27		37	
8	SL-120-SA5DN-SS-0.0-0.5	18		28		38	
9	SL-122-SA5DN-SS-0.0-0.5	19		29		39	
10	DUP09-SA5DN-QC-052711	20		30		40	

Notes: # Sb J/UJ - post spike 10x%

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: DE167
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6301476BKG Matrix Spike Lab Sample ID: 6301477MS Matrix Spike Duplicate Lab Sample ID: 6301478MSD
% Solids for Sample: 90.5
Batch Id(s): P15708D, P15726H, P15911B

Analyte	Mass	BKG Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	Units	MS %R	Q	MSD %R	Q	RPD	Q	Control Limit %R	Control Limit RPD	M
Aluminum		30141.1776		32318.3146		32852.4541		214.5577	220.9945	MG/KG	1015		1227		2			20	P
Antimony	121	0.1354	B	0.5050		0.5646		1.3128	1.3260	MG/KG	28	N	32	N	11		75 - 125	20	MS
Arsenic	75	5.2389		7.6823		7.6177		2.1881	2.2099	MG/KG	112		108		1		75 - 125	20	MS
Barium	137	137.8616		149.6855		152.6630		10.9403	11.0497	MG/KG	108		134		2			20	MS
Beryllium	9	0.8885		1.4312		1.7266		0.8752	0.8840	MG/KG	62	N	95		19		75 - 125	20	MS
Boron		0.9641	U	203.3042		213.4983		214.5577	220.9945	MG/KG	95		97		5		84 - 115	20	P
Cadmium	111	0.5003		1.5299		1.6223		1.0940	1.1050	MG/KG	94		102		6		75 - 125	20	MS
Calcium		5495.2725		5856.2195		5912.2818		429.1155	441.9890	MG/KG	84		94		1			20	P
Chromium	52	31.0259		40.8949		41.7901		10.9403	11.0497	MG/KG	90		97		2		75 - 125	20	MS
Cobalt	59	9.3251		61.6596		61.9669		54.7016	55.2486	MG/KG	96		95		0		75 - 125	20	MS
Copper	63	16.4294		26.4975		27.2707		10.9403	11.0497	MG/KG	92		98		3		75 - 125	20	MS
Iron		31761.4235		32230.9982		29432.5171		107.2789	110.4972	MG/KG	438		-2108		9			20	P
Lead	208	12.6292		17.3295		15.9978		3.2821	3.3149	MG/KG	143	N	102		8		75 - 125	20	MS
Lithium		24.0711		127.5460		131.2066		107.2789	110.4972	MG/KG	96		97		3		82 - 114	20	P
Magnesium		6578.9611		6836.6604		6792.2519		214.5577	220.9945	MG/KG	120		97		1			20	P
Manganese		463.7948		517.2912		453.7293		53.6394	55.2486	MG/KG	100		-18		13			20	P
Mercury		0.0644	B	0.2802		0.2598		0.1808	0.1767	MG/KG	119		111		8		65 - 135	20	CV
Molybdenum	98	0.5358		10.5487		10.2298		10.9403	11.0497	MG/KG	92		88		3		75 - 125	20	MS
Nickel	60	21.1461		31.9020		32.9282		10.9403	11.0497	MG/KG	98		107		3		75 - 125	20	MS
Phosphorus		387.4044		479.4593		475.7779		107.2789	110.4972	MG/KG	86		80		1		75 - 125	20	P
Potassium		5781.7452		7253.0805		7170.5845		1072.7887	1104.9724	MG/KG	137		126		1			20	P
Selenium	78	0.1948	B	2.2843		2.2762		2.1881	2.2099	MG/KG	95		94		0		75 - 125	20	MS
Silver	107	0.0643	B	11.0300		11.0232		10.9403	11.0497	MG/KG	100		99		0		75 - 125	20	MS
Sodium		101.3899	B	1097.7450		1163.6762		1072.7887	1104.9724	MG/KG	93		96		6		75 - 125	20	P
Strontium		31.7365		132.3682		136.0851		107.2789	110.4972	MG/KG	94		94		3		75 - 115	20	P
Thallium	203	0.3623		0.7785		0.7982		0.4376	0.4420	MG/KG	95		99		2		75 - 125	20	MS
Tin		2.7451	B	349.9941		367.7669		429.1155	441.9890	MG/KG	81		83		5		80 - 110	20	P
Titanium		1422.4580		1617.6731		1672.0663		107.2789	110.4972	MG/KG	182		226		3			20	P
Vanadium	51	56.6353		67.5674		69.9006		10.9403	11.0497	MG/KG	100		120		3			20	MS
Zinc	66	80.2080		89.9076		92.9282		10.9403	11.0497	MG/KG	89		115		3			20	MS
Zirconium		4.0906	B	99.9903		103.2077		107.2789	110.4972	MG/KG	89		90		3		75 - 125	20	P

METHODS:
P = ICP-Atomic Emission Spectrometer
MS = ICP-Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

Lancaster Laboratories

QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: DE167
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 6301476BKG
% Solids for Duplicate: 90.2
Batch ID(s): P15708D, P15726H, P15911B
Concentration Units: MG/KG

Duplicate Lab Sample ID: 6301479DUP
% Solids for Sample: 90.5

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			30141.1776		29016.2734		4		P
Antimony	121		0.1354	B	0.1302	B	4		MS
Arsenic	75		5.2389		5.7459		9		MS
Barium	137		137.8616		138.4190		0		MS
Beryllium	9		0.8885		0.9180		3		MS
Boron			0.9641	U	0.9641	U			P
Cadmium	111	0.1	0.5003		0.5072		1		MS
Calcium			5495.2725		5246.8942		5		P
Chromium	52		31.0259		31.2155		1		MS
Cobalt	59		9.3251		9.9660		7		MS
Copper	63		16.4294		17.6307		7		MS
Iron			31761.4235		31597.3730		1		P
Lead	208		12.6292		13.3043		5		MS
Lithium			24.0711		25.6213		6		P
Magnesium			6578.9611		6532.5534		1		P
Manganese			463.7948		445.5519		4		P
Mercury			0.0644	B	1.5586		184	*	CV
Molybdenum	98	0.1	0.5358		0.5387		1		MS
Nickel	60		21.1461		21.7595		3		MS
Phosphorus			387.4044		417.8063		8		P
Potassium			5781.7452		5851.5459		1		P
Selenium	78		0.1948	B	0.2096	B	7		MS
Silver	107		0.0643	B	0.0448	B	36		MS
Sodium			101.3899	B	99.1019	B	2		P
Strontium			31.7365		29.9697		6		P
Thallium	203	0.1	0.3623		0.3553		2		MS
Tin			2.7451	B	2.8188	B	3		P
Titanium			1422.4580		1413.7764		1		P
Vanadium	51		56.6353		58.6910		4		MS
Zinc	66		80.2080		85.6991		7		MS
Zirconium			4.0906	B	4.9691	B	19		P

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

* Hg by difference 1,494 (≤ 0.208 mg/kg)
U/nJ
(fwd 1-8, 10-12) (#9 batched with SDG DE171 4498 DE167)

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	FLAGS:
AF = Cold Vapor Atomic Fluorescence	* = Duplicate Out of Spec

SAMPLE DELIVERY GROUP

DE174

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0	6308035	N	3050B	6010B	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0	6308035	N	3050B	6020	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0	6308035	N	3060A	7199	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0	6308035	N	3546	1625C	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0	6308035	N	3550B	8015B	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0	6308035	N	3550B	8015M	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0	6308035	N	3550B	8082	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0	6308035	N	3550B	8270C	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0	6308035	N	3550B	8270C SIM	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0	6308035	N	5035	8015M	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0	6308035	N	5035	8260B	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0	6308035	N	5035	8260B SIM	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0	6308035	N	8330	8330A	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0	6308035	N	METHOD	300.0	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0	6308035	N	METHOD	314.0	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0	6308035	N	METHOD	6850	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0	6308035	N	METHOD	7471A	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0	6308035	N	METHOD	8015B	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0	6308035	N	METHOD	8015M	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0	6308035	N	METHOD	8315A	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0	6308035	N	METHOD	9012B	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0DU	P308035D270748A	DUP	METHOD	300.0	III
06-Jun-2011	SL-022-SA5DN-SB-4.0-5.0MS	P308035R270802A	MS	METHOD	300.0	III
06-Jun-2011	SL-022-SA5DN-SB-15.0-16.0	6308036	N	3050B	6010B	III
06-Jun-2011	SL-022-SA5DN-SB-15.0-16.0	6308036	N	3050B	6020	III
06-Jun-2011	SL-022-SA5DN-SB-15.0-16.0	6308036	N	3060A	7199	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
06-Jun-2011	SL-022-SA5DN-SB-15.0-16.0	6308036	N	3546	1625C	III
06-Jun-2011	SL-022-SA5DN-SB-15.0-16.0	6308036	N	3550B	8015B	III
06-Jun-2011	SL-022-SA5DN-SB-15.0-16.0	6308036	N	3550B	8015M	III
06-Jun-2011	SL-022-SA5DN-SB-15.0-16.0	6308036	N	3550B	8082	III
06-Jun-2011	SL-022-SA5DN-SB-15.0-16.0	6308036	N	3550B	8270C	III
06-Jun-2011	SL-022-SA5DN-SB-15.0-16.0	6308036	N	3550B	8270C SIM	III
06-Jun-2011	SL-022-SA5DN-SB-15.0-16.0	6308036	N	5035	8015M	III
06-Jun-2011	SL-022-SA5DN-SB-15.0-16.0	6308036	N	5035	8260B	III
06-Jun-2011	SL-022-SA5DN-SB-15.0-16.0	6308036	N	5035	8260B SIM	III
06-Jun-2011	SL-022-SA5DN-SB-15.0-16.0	6308036	N	8330	8330A	III
06-Jun-2011	SL-022-SA5DN-SB-15.0-16.0	6308036	N	METHOD	300.0	III
06-Jun-2011	SL-022-SA5DN-SB-15.0-16.0	6308036	N	METHOD	314.0	III
06-Jun-2011	SL-022-SA5DN-SB-15.0-16.0	6308036	N	METHOD	7471A	III
06-Jun-2011	SL-022-SA5DN-SB-15.0-16.0	6308036	N	METHOD	8015B	III
06-Jun-2011	SL-022-SA5DN-SB-15.0-16.0	6308036	N	METHOD	8015M	III
06-Jun-2011	SL-022-SA5DN-SB-15.0-16.0	6308036	N	METHOD	8315A	III
06-Jun-2011	SL-022-SA5DN-SB-15.0-16.0	6308036	N	METHOD	9012B	III
06-Jun-2011	SL-079-SA8N-SB-9.0-10.0	6308040	N	3050B	6010B	III
06-Jun-2011	SL-079-SA8N-SB-9.0-10.0	6308040	N	3050B	6020	III
06-Jun-2011	SL-079-SA8N-SB-9.0-10.0	6308040	N	3060A	7199	III
06-Jun-2011	SL-079-SA8N-SB-9.0-10.0	6308040	N	3546	1625C	III
06-Jun-2011	SL-079-SA8N-SB-9.0-10.0	6308040	N	3550B	8015B	III
06-Jun-2011	SL-079-SA8N-SB-9.0-10.0	6308040	N	3550B	8015M	III
06-Jun-2011	SL-079-SA8N-SB-9.0-10.0	6308040	N	3550B	8082	III
06-Jun-2011	SL-079-SA8N-SB-9.0-10.0	6308040	N	3550B	8270C	III
06-Jun-2011	SL-079-SA8N-SB-9.0-10.0	6308040	N	3550B	8270C SIM	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
06-Jun-2011	SL-079-SA8N-SB-9.0-10.0	6308040	N	5035	8015M	III
06-Jun-2011	SL-079-SA8N-SB-9.0-10.0	6308040	N	5035	8260B	III
06-Jun-2011	SL-079-SA8N-SB-9.0-10.0	6308040	N	5035	8260B SIM	III
06-Jun-2011	SL-079-SA8N-SB-9.0-10.0	6308040	N	8330	8330A	III
06-Jun-2011	SL-079-SA8N-SB-9.0-10.0	6308040	N	METHOD	300.0	III
06-Jun-2011	SL-079-SA8N-SB-9.0-10.0	6308040	N	METHOD	314.0	III
06-Jun-2011	SL-079-SA8N-SB-9.0-10.0	6308040	N	METHOD	7471A	III
06-Jun-2011	SL-079-SA8N-SB-9.0-10.0	6308040	N	METHOD	8015B	III
06-Jun-2011	SL-079-SA8N-SB-9.0-10.0	6308040	N	METHOD	8015M	III
06-Jun-2011	SL-079-SA8N-SB-9.0-10.0	6308040	N	METHOD	8315A	III
06-Jun-2011	SL-079-SA8N-SB-9.0-10.0	6308040	N	METHOD	9012B	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	3050B	6010B	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	3050B	6020	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	3060A	7199	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	3546	1625C	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	3550B	8015B	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	3550B	8015M	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	3550B	8082	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	3550B	8270C	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	3550B	8270C SIM	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	5035	8015M	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	5035	8260B	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	5035	8260B SIM	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	8330	8330A	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	METHOD	300.0	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	METHOD	314.0	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	METHOD	7471A	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	METHOD	8015B	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	METHOD	8015M	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	METHOD	8315A	III
06-Jun-2011	SL-079-SA8N-SB-4.0-5.0	6308039	N	METHOD	9012B	III
06-Jun-2011	TB-060611	6308042	TB	5030B	8015M	III
06-Jun-2011	TB-060611	6308042	TB	5030B	8260B	III
06-Jun-2011	TB-060611	6308042	TB	5030B	8260B SIM	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	3050B	6010B	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	3050B	6020	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	3060A	7199	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	3550B	8082	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	3550B	8270C	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	3550B	8270C SIM	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	5035	8260B	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	5035	8260B SIM	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	METHOD	300.0	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	METHOD	314.0	III
06-Jun-2011	SL-053-SA5DN-SB-4.0-5.0	6308037	N	METHOD	7471A	III
06-Jun-2011	SL-053-SA5DN-SB-11.5-12.5	6308038	N	3050B	6010B	III
06-Jun-2011	SL-053-SA5DN-SB-11.5-12.5	6308038	N	3050B	6020	III
06-Jun-2011	SL-053-SA5DN-SB-11.5-12.5	6308038	N	3060A	7199	III
06-Jun-2011	SL-053-SA5DN-SB-11.5-12.5	6308038	N	3550B	8082	III
06-Jun-2011	SL-053-SA5DN-SB-11.5-12.5	6308038	N	3550B	8270C	III
06-Jun-2011	SL-053-SA5DN-SB-11.5-12.5	6308038	N	3550B	8270C SIM	III
06-Jun-2011	SL-053-SA5DN-SB-11.5-12.5	6308038	N	METHOD	300.0	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
06-Jun-2011	SL-053-SA5DN-SB-11.5-12.5	6308038	N	METHOD	314.0	III
06-Jun-2011	SL-053-SA5DN-SB-11.5-12.5	6308038	N	METHOD	7471A	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	3050B	6010B	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	3050B	6020	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	3060A	7199	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	3546	1625C	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	3550B	8015B	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	3550B	8015M	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	3550B	8082	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	3550B	8270C	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	3550B	8270C SIM	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	5035	8015M	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	5035	8260B	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	5035	8260B SIM	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	8330	8330A	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	METHOD	300.0	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	METHOD	314.0	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	METHOD	7471A	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	METHOD	8015B	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	METHOD	8015M	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	METHOD	8315A	III
06-Jun-2011	SL-133-SA8N-SB-4.0-5.0	6308041	N	METHOD	9012B	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE174 Laboratory: LL

EDD Filename: PrepDE174_v1 eQAPP Name: CDM_SSFL_110509

Method Category: GENCHEM

Method: 300.0 **Matrix:** SO

Sample ID: SL-022-SA5DN-SB-15.0-16.0 *Collected:* 6/6/2011 11:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	4.2		0.87	MDL	1.1	PQL	mg/Kg	J	Q, E

Sample ID: SL-022-SA5DN-SB-4.0-5.0 *Collected:* 6/6/2011 11:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	20.2		0.91	MDL	1.1	PQL	mg/Kg	J	Q, E

Sample ID: SL-053-SA5DN-SB-11.5-12.5 *Collected:* 6/6/2011 4:00:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	5.2		0.89	MDL	1.1	PQL	mg/Kg	J	Q, E

Sample ID: SL-053-SA5DN-SB-4.0-5.0 *Collected:* 6/6/2011 3:50:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	15.9		0.94	MDL	1.2	PQL	mg/Kg	J	Q, E

Sample ID: SL-079-SA8N-SB-4.0-5.0 *Collected:* 6/6/2011 12:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	2.8		0.92	MDL	1.1	PQL	mg/Kg	J	Q, E

Sample ID: SL-079-SA8N-SB-9.0-10.0 *Collected:* 6/6/2011 11:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.6		0.94	MDL	1.2	PQL	mg/Kg	J	Q, E

Sample ID: SL-133-SA8N-SB-4.0-5.0 *Collected:* 6/6/2011 4:15:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	3.5		0.94	MDL	1.2	PQL	mg/Kg	J	Q, E
Nitrate-NO3	1.5	J	0.94	MDL	1.8	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE174 **Laboratory: LL**

EDD Filename: PrepDE174_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-022-SA5DN-SB-15.0-16.0 *Collected:* 6/6/2011 11:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	5530		6.63	MDL	21.6	PQL	mg/Kg	J	E
MANGANESE	245		0.0844	MDL	0.541	PQL	mg/Kg	J	E, E
POTASSIUM	2800		19.5	MDL	54.1	PQL	mg/Kg	J	Q
TIN	2.94	J	1.08	MDL	10.8	PQL	mg/Kg	U	B
Zirconium	1.31	J	0.909	MDL	5.41	PQL	mg/Kg	J	Z

Sample ID: SL-022-SA5DN-SB-4.0-5.0 *Collected:* 6/6/2011 11:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	12300		7.00	MDL	22.8	PQL	mg/Kg	J	E
MANGANESE	327		0.0890	MDL	0.571	PQL	mg/Kg	J	E, E
POTASSIUM	3580		20.5	MDL	57.1	PQL	mg/Kg	J	Q
TIN	3.09	J	1.14	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	2.53	J	0.959	MDL	5.71	PQL	mg/Kg	J	Z

Sample ID: SL-053-SA5DN-SB-11.5-12.5 *Collected:* 6/6/2011 4:00:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	4770		6.77	MDL	22.1	PQL	mg/Kg	J	E
MANGANESE	300		0.0862	MDL	0.553	PQL	mg/Kg	J	E, E
POTASSIUM	3220		19.9	MDL	55.3	PQL	mg/Kg	J	Q
TIN	2.95	J	1.11	MDL	11.1	PQL	mg/Kg	U	B
Zirconium	1.80	J	0.928	MDL	5.53	PQL	mg/Kg	J	Z

Sample ID: SL-053-SA5DN-SB-4.0-5.0 *Collected:* 6/6/2011 3:50:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	18000		7.18	MDL	23.4	PQL	mg/Kg	J	E
MANGANESE	242		0.0913	MDL	0.585	PQL	mg/Kg	J	E, E
POTASSIUM	3170		21.1	MDL	58.5	PQL	mg/Kg	J	Q
TIN	2.94	J	1.17	MDL	11.7	PQL	mg/Kg	U	B
Zirconium	1.98	J	0.984	MDL	5.85	PQL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling

Data Qualifier Summary

Lab Reporting Batch ID: DE174 **Laboratory: LL**

EDD Filename: PrepDE174_v1 **eQAPP Name: CDM_SSFL_110509**

Method Category: METALS

Method: 6010B **Matrix: SO**

Sample ID: SL-079-SA8N-SB-4.0-5.0 *Collected:* 6/6/2011 12:05:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	3190		6.97	MDL	22.7	PQL	mg/Kg	J	E
MANGANESE	628		0.0887	MDL	0.568	PQL	mg/Kg	J	E, E
POTASSIUM	2580		20.5	MDL	56.8	PQL	mg/Kg	J	Q
TIN	3.00	J	1.14	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	2.88	J	0.955	MDL	5.68	PQL	mg/Kg	J	Z

Sample ID: SL-079-SA8N-SB-9.0-10.0 *Collected:* 6/6/2011 11:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	3660		6.99	MDL	22.8	PQL	mg/Kg	J	E
MANGANESE	175		0.0889	MDL	0.570	PQL	mg/Kg	J	E, E
POTASSIUM	2140		20.5	MDL	57.0	PQL	mg/Kg	J	Q
TIN	3.06	J	1.14	MDL	11.4	PQL	mg/Kg	U	B
Zirconium	2.62	J	0.957	MDL	5.70	PQL	mg/Kg	J	Z

Sample ID: SL-133-SA8N-SB-4.0-5.0 *Collected:* 6/6/2011 4:15:00 PM *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	10200		6.94	MDL	22.7	PQL	mg/Kg	J	E
MANGANESE	685		0.0883	MDL	0.566	PQL	mg/Kg	J	E, E
POTASSIUM	2780		20.4	MDL	56.6	PQL	mg/Kg	J	Q
TIN	3.09	J	1.13	MDL	11.3	PQL	mg/Kg	U	B
Zirconium	4.96	J	0.951	MDL	5.66	PQL	mg/Kg	J	Z

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-022-SA5DN-SB-15.0-16.0 *Collected:* 6/6/2011 11:50:00 *Analysis Type:* REA *Dilution:* 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.0885	J	0.0630	MDL	0.210	PQL	mg/Kg	J	Z, Q
CHROMIUM	23.0		0.126	MDL	0.420	PQL	mg/Kg	J	A
LEAD	4.98		0.0109	MDL	0.210	PQL	mg/Kg	J	Q, E
SILVER	0.0549	J	0.0126	MDL	0.105	PQL	mg/Kg	J	Z
VANADIUM	35.8		0.0231	MDL	0.105	PQL	mg/Kg	J	A

* denotes a non-reportable result

Project Name and Number: 1203-004-008-AL - SSFL Area IV Collocated Soil Sampling